Original Article

Child unintentional injury prevention in Eastern Mediterranean Region

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ABSTRACT

Background: Unintentional injuries are one of the leading causes of death and disability among children in Eastern Mediterranean Region (EMR). The issue of child injuries in the EMR is a major public health concern.

Objectives: This study aimed to present the epidemiological pattern of children's unintentional injuries in this region and compare the results for the EMR member states and the global status based on the findings of the World Report.

Materials and Methods: This is a secondary analysis and focuses on unintentional injuries specifically road traffic injuries, drowning, burns, falls and poisoning, and adjusted for countries from EMR.

Results: About 12% of all deaths due to unintentional injuries taking place globally under the age of 20 years took place in EMR with 113,327 deaths which is about 19% higher than the world rate (45.5 Vs. 38.8 per 100,000). In EMR the top five leading causes of death due to childhood unintentional injuries are reported to be from road traffic injuries (17.4 per 100,000), drowning (6.8 per 100,000), burns (4.5 per 100,000), falls (2.9 per 100,000) and poisoning (1.6 per 100,000). Estimated mortality showed that boys were more likely to be killed than girls. However, there was no significant difference for by age group.

Conclusions: Injuries are the leading cause of death and disability among children in the EMR and that injury programmes focusing on major risk factors need to be integrated into other child health strategies, with ministries of health playing a pivotal role.

Key Words: Child, Eastern Mediterranean Region, injury, unintentional

INTRODUCTION

Unintentional injuries among children are the commonest cause of death and hospital admission worldwide, and can result in lifelong disability. They are a growing global public health problem and responsible for about 950,000 deaths in children under the age of 18 years each year.[1] Injuries can be prevented or controlled. In Eastern Mediterranean Region (EMR), unintentional injuries are one of the leading causes of death and disability in children. In 2004, about 12% of all global deaths due to unintentional injuries in age group under the age of 20 years occurred in EMR with 113,327 cases which is about 19% higher than the world rate (45.5 Vs. 38.8 per 100,000). More than 95% of these deaths occurred in low and middle income countries (LMIC) of the region.

The overall aims of the report are: To raise awareness about the magnitude, risk factors and impacts of child injuries in the region; to draw attention to the preventability of child injuries and present what is known about the effectiveness of preventive interventions; and to make recommendations that can be implemented by...
most of the countries in the EMR to reduce child injuries effectively.

**MATERIALS AND METHODS**

This is a secondary data analysis of World Report on Child Injury Prevention[2] focuses on most common unintentional injuries among children namely: Road traffic injuries (RTIs), drowning, burns, falls and poisoning, and adjusted for countries in the EMR. The report used the definition of a child specified in the Convention on the Rights of the Child,[3] and thus focuses on injuries occurring in children “under the age of 18 years”. However, it has not always been possible to reflect this age cut-off in analyzing data. In some cases data could not be disaggregated to <18 years, and so the category of <20 years is used instead. For the sake of clarity, age ranges are always indicated in tables and figures in the report.

An injury is defined as “the physical damage that results when a human body is suddenly subjected to energy in amounts that exceed the threshold of physiological tolerance – or else the result of a lack of one or more vital elements, such as oxygen”. [4]

The development of this report was led by an Advisory Committee constituted by WHO and an Editorial Board and has taken place over nearly three years.

Based on the literature reviewed, evidence was graded as: Effective, promising, insufficient evidence, ineffective or potentially harmful. Randomized controlled trials and case–control studies were used as the gold standard. Where study methodologies were robust but they were limited to a few high-income countries they were classified as promising. Nearly 200 professionals from various sectors and all the regions of world provided input to the report. The draft s of specific chapters were reviewed and revised following input from four regional consultations organized by the WHO regional offices – involving local experts, practitioners and government officials – as well as input from a set of external peer reviewers.

Where there was clear evidence that the intervention did not work or was harmful, these were classified as ineffective and potentially harmful, respectively. For many interventions in the area of child injury prevention there is simply insufficient evidence.

There are 22 member states in EMR with 6 countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates) are considered high income countries while the remaining are deemed low and middle income (Based on the World Blank classification). EMR constitutes about 9% of the world population (approximately 560 million people) and considered a middle income Region. Log-linear model was used to determine whether there were any significant relationships in the two-way contingency table. In addition, this model was applied to identify if the distribution of the counts among the cells of the table can be explained by a simpler structure.

For the top five leading causes of unintentional injury deaths in children, saturated model that contained G, A and possible interactions among them (R*G) was employed.

\[
\log(\mu_{ij}) = \lambda + \lambda_G^{i} + \lambda_A^{j} + \lambda_{GA}^{i,j} \quad i = 1,2, \quad j = 1,2,3,4,5
\]

**RESULTS**

**Child injuries in context**

In EMR, unintentional injuries are one of the leading causes of death and disability in children. In 2004, about 12% of all global deaths due to unintentional injuries among the age group under 20 years occurred in EMR with 113 327 deaths which is about 19% higher than the world rate (45.5 Vs. 38.8 per 100 000). More than 95% of these deaths occurred in low and middle income countries (LMIC).

Rate of unintentional injuries per 100 000 children in EMR is 41.6 and 45.7 in high income countries (HIC) and low and middle income countries (LMIC) of the region respectively. About 9 percent of the world’s populations live in EMR. Rates of unintentional injuries among children for different age groups of both sexes in EMR are higher than the peer rates of the world. Table 1 shows estimated mortality for all unintentional injuries among children by sex, and age group in EMR countries and the world. The top five leading causes of deaths due to unintentional among children under the age of 20 years from the EM region are from RTIs (17.4 per 100 000), drowning (6.8 per 100 000), burns (4.5 per 100 000), falls (2.9 per 100 000) and poisoning (1.6 per 100 000). Table 2 shows the parameter estimates of the saturated model. The interaction term of sex and age \( (\lambda_{ij}^{GA}) \) assesses the association between the two variables. The main effect of sex \( (\lambda_G^i) \) and age \( (\lambda_A^j) \) tests the null hypothesis that the subjects are distributed evenly over the levels of each variable. Here we have two not evenly distributed variables, thus \( P > 0.05 \) for both main effects. The restricted model (removing the interaction term) was not adequate with the data.

**Road traffic injuries**

In 2004, the mortality rate from RTIs in EMR was 17.4 deaths per 100 000 population under 20 years, the
second highest in the world after the African Region. Of all the unintentional injuries among children in the region, 38.3% were from children’s RTIs. This denotes 16.5% of mortality among children out of the global mortality for due to RTIs with fatal outcomes. The highest rates of road traffic deaths were in the African and Eastern Mediterranean Regions in the same year. The road traffic death rate among children globally is 10.7 versus 17.4 per 100 000 population in EMR. Overall, the death rate for boys is 13.8 per 100 000 population, compared to a rate of 7.5 per 100 000 population for girls. In high-income countries in EMR the gender gap is greatest among young children while in the regions of Europe, the Western Pacific and the Americas the gap is more pronounced among older children.

Table 1 shows a comparison of estimated mortality for injuries among children due to road traffic injuries by sex, and age group in EMR countries and the world.

### Table 3: Estimated mortality of all children’s road traffic injuries (rate per 100 000 population) by sex, and age group - Eastern Mediterranean Region and world

| Place/gender | <1  | 1-4 | 5-9 years | 10-14 | 15-19 | Under 20 |
|--------------|-----|-----|-----------|-------|-------|----------|
| **EMR**      |     |     |           |       |       |          |
| Boys         | 8592 (127.3) | 14189 (54.4) | 16062 (50.3) | 11811 (36.9) | 18347 (59.9) | 69002 (54.2) |
| Girls        | 6281 (97.3) | 10985 (44.1) | 10995 (36.0) | 6345 (20.8) | 9719 (33.2) | 44325 (36.4) |
| Both         | 14873 (112.7) | 25174 (49.4) | 27057 (43.3) | 18156 (29.0) | 28066 (46.9) | 113327 (45.5) |
| **World**    |     |     |           |       |       |          |
| Boys         | 61832 (94.3) | 120427 (47.2) | 119805 (38.1) | 87875 (27.8) | 159174 (51.4) | 549113 (43.6) |
| Girls        | 60528 (98.1) | 106150 (44.3) | 90227 (30.6) | 58354 (19.6) | 85993 (29.3) | 401253 (33.8) |
| Both         | 122360 (96.1) | 226577 (45.8) | 210032 (34.4) | 146230 (23.8) | 245167 (40.6) | 950366 (38.8) |

Table 2: Saturated model of Table 1 - Estimated mortality of all children’s unintentional injuries (rate per 100 000 population) by sex, and age group - Eastern Mediterranean Region and world

| Variable        | World | EMR |
|-----------------|-------|-----|
|                  | Estimate | SE | P     | Estimate | SE | P     |
| Constant        | 11.011 | 0.004 | <0.001 | 8.754 | 0.013 | <0.001 |
| Gender          |       |     |       | 0.021 | 0.006 | <0.001 |
| Female          |       |     |       | 0.313 | 0.017 | <0.001 |
| Age             |       |     |       |       |     |       |
| 15-19           | 0.351 | 0.005 | <0.001 | 0.437 | 0.016 | <0.001 |
| 10-14           | −0.037 | 0.006 | <0.001 | 0.010 | 0.018 | 0.569 |
| 5-9             | 0.399 | 0.005 | <0.001 | 0.560 | 0.016 | <0.001 |
| 1-4             | 0.532 | 0.005 | <0.001 | 0.559 | 0.016 | <0.001 |
| Gender*Age      |       |     |       |       |     |       |
| Male            |       |     |       |       |     |       |
| 15-19           | 0.594 | 0.007 | <0.001 | 1.81 (1.79,1.84) | 0.322 | 0.021 | <0.001 | 1.38 (1.32,1.44) |
| 10-14           | 0.388 | 0.008 | <0.001 | 1.47 (1.45,1.50) | 0.308 | 0.023 | <0.001 | 1.36 (1.30,1.42) |
| 5-9             | 0.262 | 0.007 | <0.001 | 1.30 (1.28,1.32) | 0.066 | 0.021 | 0.002 | 1.07 (1.03,1.11) |
| 1-4             | 0.105 | 0.007 | <0.001 | 1.11 (1.10,1.13) | −0.057 | 0.021 | 0.006 | 0.94 (0.91,0.98) |
| Female          |       |     |       |       |     |       |
| 15-19           | 0.594 | 0.007 | <0.001 | 1.81 (1.79,1.84) | 0.322 | 0.021 | <0.001 | 1.38 (1.32,1.44) |
| 10-14           | 0.388 | 0.008 | <0.001 | 1.47 (1.45,1.50) | 0.308 | 0.023 | <0.001 | 1.36 (1.30,1.42) |
| 5-9             | 0.262 | 0.007 | <0.001 | 1.30 (1.28,1.32) | 0.066 | 0.021 | 0.002 | 1.07 (1.03,1.11) |
| 1-4             | 0.105 | 0.007 | <0.001 | 1.11 (1.10,1.13) | −0.057 | 0.021 | 0.006 | 0.94 (0.91,0.98) |

### Table 4: Estimated mortality of all children’s road traffic injuries (rate per 100 000 population) by sex, and age group - Eastern Mediterranean Region and world

| Place/gender | <1  | 1-4 | 5-9 years | 10-14 | 15-19 | Under 20 |
|--------------|-----|-----|-----------|-------|-------|----------|
| **EMR**      |     |     |           |       |       |          |
| Boys         | 2224 (33.0) | 4800 (18.4) | 7628 (23.9) | 5153 (16.1) | 8915 (29.1) | 28719 (22.6) |
| Girls        | 1430 (22.2) | 3486 (14.0) | 4611 (15.1) | 2164 (7.1) | 2961 (10.1) | 14651 (12.0) |
| Both         | 3654 (27.7) | 8286 (16.3) | 12238 (19.6) | 7317 (11.7) | 11875 (19.8) | 43370 (17.4) |
| **World**    |     |     |           |       |       |          |
| Boys         | 7535 (11.5) | 24853 (9.7) | 41662 (13.3) | 27366 (8.7) | 72476 (23.4) | 173892 (13.8) |
| Girls        | 4545 (7.4) | 19846 (8.3) | 27554 (9.3) | 13322 (4.5) | 23219 (7.9) | 88486 (7.5) |
| Both         | 12079 (9.5) | 44699 (8.0) | 69217 (11.4) | 40688 (6.6) | 95694 (15.9) | 262378 (10.7) |
Drowning is responsible for 14.9% of unintentional injury deaths in this age group in the EM region.

Global drowning is the third leading cause of death due to unintentional injuries among children and youth. It is the second leading cause of deaths due to unintentional injury among the age group below 20 years age in EMR. For example, in Palestine territory (in 2008) it was reported to be the 3rd leading cause of death and in Iran (in 1998) is reported to be 2nd leading cause of death from unintentional injuries in age group under 20 years (Please insert reference if this is from a source other than world report). However, the death rate in the region is lower than the world rate (6.8 vs. 7.2 per 100 000).

The death rate is more than twice higher among boys than girls (9.1 vs. 4.4 per 100 000).

Near-drowning events, in which victims survive for at least 24 hours, also result in significant numbers of injured children. It is estimated that for each drowning death, there are 1 to 4 nonfatal submersions serious enough to result in hospitalization. Table 4 shows a comparison of the estimated mortality of drowning among children by sex, and age group in EMR countries and the world.

Burns
Table 5 shows a comparison of estimated mortality among children who died of fire-related burns by sex, and age group in EMR countries and the world. Worldwide 95 772 children under the age of 20 years (30% of death burns in all ages) have been fatally injured as a result of burns in 2004 alone. This figure in EMR is 11 079 (11.6% of global mortalities as a result of burns). Burns are responsible for 9.8% of all deaths due to unintentional injury in the region. The death rate is higher among girls than boys (5.5 vs. 3.5 per 100 000). The death rate in low-income and middle-income countries of EMR is 4.7 per 100 000 which is about 12 times higher than that in high-income countries. Infants have the highest rates (12.1 per 100 000), while those aged between 10 and 14 years have the lowest rates (2.0 per 100 000). The death rate also shows an upward trend for age group 1-4 year olds (7.0 per 100 000). Burns rank as 3rd cause death due to unintentional injury among children in countries of the EMR. Outcomes of burns are costly and prolonged hospitalizations, multiple surgeries, skin grafts, risk of infection and disfigurement put tremendous economic and human cost on households and governments.

Falls
In 2004, an estimated 424 000 people of all ages died from falls worldwide, with 46 894 among them were children aged under the age of 20 years (4.9% of all deaths among children due to unintentional injury). This figure in EMR was 7 113 (15.2% of global mortalities as a result of falls). Although the majority of fall-related deaths are among elders, falls do rank as the 12th and fifth leading cause of unintentional injury death among 5 to 9 year olds and 15 to 19 year olds, respectively. Among children in EMR falls are the 11th leading cause of disability adjusted life years lost (DALYs).

Contrary to the high prevalence of falls in high-income countries in the Americas, low-income and middle-income countries in Eastern Mediterranean region have a high
mortality rate due to falls that is more than 14 times higher. Falls is responsible for 6.3% of deaths due to unintentional injury in this age group in the region. The death rate in the region is higher than the world rate (2.9 vs. 1.9 per 100 000). It is also more among boys than girls (3.5 vs. 2.2 per 100 000).

The death rate in low-income and middle-income countries of the region is slightly higher than that in high-income countries (2.9 vs. 2.2 per 100 000) compared to the global figures revealing a wide difference between these two groups of countries (2.1 vs. 0.4 per 100 000). The vast majority (97.8%) of deaths among children due to falls occur in low-income and middle-income countries of EM region. The highest death rate occur in poorer areas of Eastern Mediterranean Region (2.9 per 100 000) with 15.2% of all global deaths from falls. Table 6 shows a comparative estimated mortality of deaths among children due to falls by sex, and age group in EMR countries and the world.

Table 6: Estimated mortality of all children’s falls (rate per 100 000 population) by sex, and age group - Eastern Mediterranean Region and world

| Years  | <1   | 1-4  | 5-9  | 10-14 | 15-19 | Under 20 |
|--------|------|------|------|-------|-------|----------|
| EMR    |      |      |      |       |       |          |
| Boys   | 833  (12.3) | 1143 (4.4) | 1127 (3.5) | 541 (1.7) | 805 (2.6) | 4448 (3.5) |
| Girls  | 418  (6.5)  | 769 (3.2)  | 772 (2.5)  | 293 (1.0) | 387 (1.3) | 2665 (2.2) |
| Both sexes | 1250 (9.5) | 1939 (3.8) | 1899 (3.0) | 834 (1.3) | 1191 (2.0) | 7113 (2.9) |
| World  |      |      |      |       |       |          |
| Boys   | 4429 (6.8)  | 5458 (2.1) | 6801 (2.2) | 3637 (1.2) | 7993 (2.6) | 28317 (2.3) |
| Girls  | 2280 (3.7)  | 4524 (1.9) | 5215 (1.8) | 2209 (0.7) | 4348 (1.5) | 18577 (1.6) |
| Both sexes | 6709 (5.3) | 9982 (2.0) | 12016 (2.0) | 5846 (1.0) | 12341 (2.1) | 46894 (1.9) |

EMR: Eastern Mediterranean Region

Table 7: Estimated mortality of all children’s poisonings (rate per 100 000 population) by sex, and age group - Eastern Mediterranean Region and world

| Years  | <1   | 1-4  | 5-9  | 10-14 | 15-19 | Under 20 |
|--------|------|------|------|-------|-------|----------|
| EMR    |      |      |      |       |       |          |
| Boys   | 497  (7.4)  | 346 (1.3)  | 355 (1.1)  | 261 (0.8)  | 642 (2.1)  | 2101 (1.7)  |
| Girls  | 335  (5.2)  | 196 (0.8)  | 341 (1.1)  | 262 (0.9)  | 636 (2.2)  | 1770 (1.5)  |
| Both sexes | 832 (6.3)  | 542 (1.1)  | 696 (1.1)  | 523 (0.8)  | 1278 (2.1) | 3871 (1.6)  |
| World  |      |      |      |       |       |          |
| Boys   | 3556 (5.4)  | 7382 (2.9) | 4057 (1.3) | 3580 (1.1) | 6606 (2.1) | 25181 (2.0) |
| Girls  | 2273 (3.7)  | 4761 (2.0) | 3448 (1.2) | 3672 (1.2) | 5717 (2.0) | 19870 (1.7) |
| Both sexes | 5829 (4.6) | 12143 (2.5) | 7505 (1.2) | 7252 (1.2) | 12323 (2.1) | 45051 (1.8) |

EMR: Eastern Mediterranean Region

Common poisoning agents in the region include pharmaceuticals, household cleaning agents (e.g., bleach, cleaning agents), pesticides, hydrocarbons used for fuel and lighting, poisonous plants and bites from insects/animals. Poisonings do rank as the fifth leading cause of death among children under the age of 20 years due to unintentional injury in the region. The death rate is slightly more among boys than girls (1.7 vs. 1.5 per 100 000). The vast majority (97.4%) of deaths among children due to falls occur in low-income and middle-income countries in EM region. Table 7 shows a comparison of estimated mortality among children due to poisoning by sex, and age group in EMR countries and the world.

DISCUSSION

Unintentional injuries are one of the leading causes of death and disability in children in EMR. The top five leading causes of deaths due to unintentional injury among children in EMR are from RTIs, drowning, burns, falls and poisoning. Except for drowning and poisoning, the rates of other injuries are higher than the total world figures. This is the first regional report on child injuries, which is based on the secondary analysis of the World Report on Child Injury Prevention and presents the current knowledge and understanding about the five most important causes of unintentional injury among children under the age of 18 years as well as some of the actions that need to be taken in order to tackle the problem.
Children in poorer countries and those from poorer families in better-off countries are the most vulnerable for exposure to injury. More than 95% of deaths due to injury among children occur in such countries. Approximately 40% of the deaths among those under 18 years of age in high-income countries are the result of an injury — an indication of the fact that these countries, although doing better, still have a serious problem.

Specific concern for the lives, health and well-being of children is voiced in a series of international agreements and initiatives. Most notable of these is the Convention on the Rights of the Child, adopted in November 1989 during a session of the United Nations General Assembly, which affirms that each child has the right to the highest attainable level of health and the right to a safe environment. The Convention requires that “all appropriate legislative, administrative, social and educational measures to protect the child from all forms of physical or mental violence, injury or abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse” are taken by countries. Most countries in the world have ratified this convention, and it represents a powerful statement of their collective views on the responsibilities towards children. In addition, the fourth objective of the Millennium Development Goals (MDG) is to reduce by two thirds the mortality of children under five years of age by the year 2015. Most countries are focusing on reducing infectious diseases only in order to achieve the targets set out in the MDG 4, completing neglecting the burden of deaths caused by injuries. In many places the relative proportion of deaths as a result of injuries in this age group is significant enough to hamper the attainment of the MDG 4 if it is not addressed at the same time with the same focus. Child survival has been described as “the most pressing moral dilemma of the new millennium”. As injuries are a leading cause of death and disability among children worldwide, efforts to prevent those injuries is particularly important for the wider issue of child survival and the improvement globally of child health. Injury programmes need to be integrated into other child health strategies, with ministries of health playing a pivotal role. In addition, injuries need to be included as one of the indicators in overall child survival programmes.

Simply reproducing safe strategies that are relevant to adults will not protect children sufficiently. Various developmental issues, risk taking behaviours, levels of activity and the child’s degree of dependence make the matter more complicated. Prevention programmes that take into account these vulnerabilities and use a multidisciplinary approach have been shown to be the most effective for reducing child mortality as a result of injury. A number of countries have achieved remarkable reductions in their child injury death rates, in some cases by more than 50%.

For RTIs, a report in 2009 showed that EMR has one of the worst road safety situations in the world with 32.2 deaths from RTIs per 100 000 population and 33.3 per 10 000 vehicles. Most studies in different countries of the region show RTIs as a major cause of death in their countries. Many countries in the region require helmet standards, child restraint laws, and apply seat belt law to all car occupants, and road safety strategy.

For children’s drowning, like many other types of children’s unintentional injuries the published reports of the region are very rare. Worldwide drowning is the third leading cause of unintentional death in children and youth. It is the second leading cause of unintentional injury death among this group in EMR. A study in Iran showed that drowning with 17.9% is the second cause of deaths from all children’s unintentional injuries and boys are more likely to be drowned about 1.5 times more than girls. Drowning among Pakistani children and among children in the United Arab Emirates is the second cause of deaths from unintentional injuries. Effective preventive strategies have been recommended on training and equipment to reduce rollover events and on the expeditious extrication of victims. Most drowning deaths could be prevented by a sustained effort to implement safety interventions. Available studies suggest that people living in countries that are densely populated, with a large amount of open water are at a higher risk of drowning. Other risk factors, such as gender and age, appear to be almost universal.

Burns are responsible for about ten percent of all unintentional injury deaths in the region. The mortality rate is higher in females and most of the burns among children occur in the home. There is a number of measures are effective in preventing burns. These include the introduction and enforcement of items such as smoke alarms, residential sprinklers and fire-safe lighters, and laws regulating the temperature of hot-water taps. The risk factors depend on different mechanisms that lead to burns. Some of the interventions to prevent various types of burn injuries among children are on engineering and design (such as use of safer lamps and stoves, smoke alarms, residential sprinklers), environmental measures (for instance modifying or improving construction materials; improving heating and lighting equipment in homes; raising cooking facilities off the ground; separating cooking areas from living areas); the introduction of legislation and standards (such as laws on the temperature of hot-water taps, banning fireworks and standards for child-resistant lighters); and educational measures. Strategies which combine legislation and standards, product modification and education appear to have the most far-reaching effects in reducing the incidence of burns.

Overall, 15.2% of global mortalities as a result of falls occur in EMR. Falls occur among all ages and stages of.
childhood accounting for 5-15% of all childhood injury causes. Developing countries have a disproportionately high rate of fall-related injuries among children. The highest rate on the Asian continent has been recorded in the United Arab Emirates with an incidence of some 1923 per 100,000 population.\[10\] Children falling from stairs and windows are generally younger than those who fall from roofs, playground equipment and walls.\[19\] The establishment of building code regulations for safety devices on these height sites and to mandate safer housing and playground equipment to protect these children from fall injuries and education programs for both parents and children are necessary. Major reductions in the incidence of childhood fall injuries have been achieved by removing or redesigning nursery furniture, playground equipment, sports and recreational equipment, and other items such as shopping carts and wheelchairs.\[2\]

Fatal poisoning rates in low-income and middle-income countries of the region are more than twice that of high-income countries. Poisonings are the fifth leading cause of unintentional injury death among fewer than 20 years old of the region. They are responsible for about 5% of all injury deaths in the region. In many countries the number of fatalities as a result of poisoning has been reduced over the past years, however, hospital admissions for poisonings have increased in recent years. Adequate parental supervision and safe packing, storage and disposal of potentially hazardous substances could be the most important activities for prevention of childhood poisoning. Furthermore, manufacturers and traders must by law put certain toxic household products and drugs in child resistant containers, and mark toxic medicines with warning labels or signs.\[20\]

**CONCLUSION**

In conclusion, as injuries are a leading cause of death and disability among children of the region, injury programmes focusing of major risk factors need to be integrated into other child health strategies, with ministries of health playing a pivotal role. In addition, children’s unintentional injuries need to be included as one of the indicators in overall child survival programmes. More considerations are recommended to researchers in this region to study the scope of the problem, risk factors, interventions and evaluation of children’s unintentional injuries.

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There are no conflicts of interest.

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