School Pupil Police Officer (Hamyare Police) -
A national initiative based on social participation to improve road safety

Islamic Republic of Iran

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Executive Summary

The vision of the Social Determinants of Health Strategic Plan in the Islamic Republic of Iran is to provide equal opportunities for everyone to enjoy good health, working in collaboration with governmental and non-governmental organizations and using community participation to achieve this objective. One of the priority areas in the current SDH plan of action is traffic injuries, as these are a major burden of disease and a source of health inequity. Road traffic injuries impose a great socioeconomic burden in low and middle income countries in the Eastern Mediterranean Region. In the Islamic Republic of Iran road traffic injuries are the most important cause of DALYs (Disability Adjusted Life Years), the second cause of YLL (Years Life Lost) and the third cause of YLD (Years Life Disability). One of the major reasons for catastrophic health expenditure in Iran is post trauma care for the victims of road traffic injuries. Most victims of road traffic accidents are poor people who rarely have the opportunity to own a car or even to drive one, yet they have to pay the cost of health care as an out-of-pocket expense. These findings resulted in action at the highest level of government. This case study focuses on school pupils known as Hamyare Police who act as traffic officers. This is a national initiative to improve road safety based on social participation. A joint program between the Ministry of Education and Iran’s traffic police started in 2006. This initiative focuses on traffic education for pupils in schools as a long-term investment. Eight million pupils throughout the country work with the traffic police in the Hamyare Police campaign. The main goals of this program are to teach the traffic signs and safety rules to the children and encourage them to work as a Hamyare Police; and to encourage parents to promote the use of protective measures for their children. The findings of Hamyare Police project will demonstrate the role of a social participation intervention started simultaneously on a national and local level. Changes in process and outcome indicators will be used to evaluate the program.

Problem Space

Equity and justice are major principles incorporated into government policy. To improve health and equity in health, the Ministry of Health and Medical Education has identified health equity as the ultimate goal of Iran’s health system, to be addressed through Social Determinants of Health (SDH). This approach needs multi-sectoral collaboration and effective partnership with other social sectors, as SDH originate outside the health sector. The vision of the SDH Strategic Plan in Iran is to provide equal opportunities to enjoy health through a collaboration with governmental and non-governmental
organizations, which together promote community participation. The mission of I.R. Iran is to take on the responsibility to promote national planning policies and actions which recognize the role of social determinants of health within the society. The government attempts to minimize the consequences of negative social determinants of health and health inequalities. The national SDH Secretariat, situated in the Ministry of Health and Medical Education, in collaboration with experts from relevant sectors and researchers, have identified and prioritized national social determinants of health in 14 areas as follows: 1) Traffic Accidents; 2) Early Child Development; 3) Mental and spiritual health; 4) Equitable health care delivery; 4) Unemployment and job security; 5) Nutrition and food security; 6) Healthy lifestyle; 7) Education, awareness and literacy; 8) Housing; 9) Environment; 10) Social support; 11) Marginalized, deprived and desert areas; 12) Economic security; 13) Equitable distribution of resources; and 14) Vulnerable groups such as households headed by women.

Evidence from a 2003 burden of disease study identified traffic injuries as a priority area and also indicated inequalities in the impact of these accidents on various social and demographic sectors. Road traffic injuries are a huge public health challenge and development problem. Worldwide, an estimated 1.3 million people die as a result of motor vehicle collisions each year, more than 3000 deaths each day, and as many as 50 million are injured. Almost half of those killed are pedestrians, cyclists and motorcyclists. Projections indicate that, unless appropriate action is taken, by 2020 these will increase by about 67%: an increase by 83% in low and middle income countries, and a decrease by 27% in high income countries. Ninety percent of road traffic deaths occur in low and middle income countries which claim 48% of the world’s registered vehicle fleet. In the Eastern Mediterranean region road traffic injuries are in the 6th place with nearly 400 deaths each day, and 17 deaths each hour. (http://www.who.int/violence_injury_prevention/road_safety_status/2009/en/). Road traffic injuries in Islamic Republic of Iran are the first cause of DALY (Disability Adjusted Life Years), the second cause of YLL (Years Life Lost) and the third cause of YLD (Years Life Disability) which puts significant strain on health care budgets. Governmental intervention was needed to improve road safety and decrease the number of death and injured.
For every 100,000 Iranians, 21,572 DALYs were lost due to all disease and injuries. The highest number of DALYs in males were road traffic injuries (1.071 million, the 4th leading cause after Ischemic heart disease, major depressive disorder and natural disasters. Eighty per cent of traffic fatalities were male, 20% female. As is shown in figure 2- road traffic injury deaths increased dramatically during the years 1994 (10545) to 2006 (27746). In 2006, mortality from road crashes declined for the first time, after having risen steadily for years.
The great burden on health and the high economic and emotional cost of road traffic accidents resulted in action at the highest level to decrease the number of death and injured. One of the reasons for catastrophic health expenditure in Iran is post trauma care for the victims of road traffic injuries, which is an example of SDH and health inequity. Most of the victims of traffic accidents never find the opportunity to own a car or even drive one, yet they are the most likely to become injured and have to pay health care cost as out-of-pocket expenditure. This finding resulted in action at the highest level of government. As road safety is a multisectoral responsibility, the President established a multisectoral commission to address this issue, in collaboration with other line ministries and agencies responsible for transport planning, road construction, health, communications, education and finance.
The Road Safety Commission (RSC) in the Ministry of Road & Transportation (MoRT) in collaboration with other sectors was established in 2003. All the authorities concerned in road safety joined the Commission, under the supervision of the Minister of Roads and Transportation.

Five committees were formed to promote road safety and prevent traffic injuries:

1. Education & Capacity building
2. Safe road engineering
3. Transport
4. Traffic and law enforcement
5. Emergency management

**Context**

Traffic accidents are a major inequity, as more than half of those injured on the roads are vulnerable road users such as pedestrians, cyclists and riders and passengers of motorized two wheelers, predominantly of low socio-economic status.

![Deaths By Road User Category](image)

**Figure 3** (Source: first global status report on road safety, Islamic republic of Iran, fact sheet)

The rapid increase in motorized vehicles, without sufficient improvement in road safety and land use
planning are, in large part, responsible for the increase in traffic accidents. The main social determinants that contribute to shaping the problem include the population structure of Iran, with 68% of the country's population aged between 15 and 64 years old), the paradox of gas subsidy (approximately, 0.1 USD /liter or 0.4 USD/gallon), and weak public transportation, the rapid increase of vehicle manufacturing. Unsafe roads and inadequate safety equipment of vehicles and unsafe motorcycles are also a contributing factors; fewer than 6% of the cars produced are equipped with driver-side airbags and (ABS) Antilock Braking System. Unsafe and risky behaviour, such as speeding, low-use of helmets by two-wheeled vehicle users, low-use of seat-belts and no use of child restraints in motor vehicles also contributes to accidents. Rapid urbanization and centralizing the health care facilities in the capital results in an increase in traffic movement. The Haddon matrix provides a useful analytical basis for designing interventions regarding the role of human, vehicle and road in the pre crash, crash and post crash.

Considering the multi-dimensional nature of road traffic injuries, applying a systematic community based approach, enforcement of law and legislation, engineering, environment modification, education, emergency care and evaluation were considered as the main pillars of the road safety framework in the country. For example, to address the health inequity due to catastrophic medical care costs, through the efforts of the Road Safety Commission, article 92 in the 4th national Socio-economic and Cultural Development Plan was approved, making the Ministry of Health and Medical Education responsible for free of charge care to all road traffic injured in all public and private health care facilities. In the 5th Socio-economic and Cultural Development Plan (2010-14) article 37 also included free of charge transport to health care facilities. In this article, 10% of the mandatory third party premium of all kinds of motor vehicles is deposited with the Ministry of Health and Medical Education to compensate for the costs of this free of charge care. Therefore road traffic injuries are no longer a cause of catastrophic medical care cost for the families. A 10-year strategic plan with a related plan of action to identify roles and responsibilities of different sectors has been developed by the Road Safety Commission, shared with parliament and approved for implementation. Targeting subsidies and cash transfer schemes has been put on the agenda of the cabinet. As part of the law to remove subsidies, the government of Iran has not allocated any subsidies on fuel and energy components for imported cars and cars with a 2000 volume capacity engine. Fuel cards have been distributed among owners of other cars for fixed price
The 2003 burden of disease study highlighted transport accidents as the number one cause of death and the second most important cause of morbidity for males; for females they were the fourth most important cause of death. Regarding the high socioeconomic and emotional costs of road traffic injuries, road safety must be considered as a priority among policy and decision makers. It is likely that recent road safety campaigns, health literacy, awareness raising, and enforcement of the laws, regulations, risks for traffic injuries, safety measures such as wearing of seat belts and helmets will help to prevent and control mortality and morbidity from road accidents.

Planning

This case study is focusing on the School Pupil Police officer (Hamyare Police) as a national initiative based on social participation to improve road safety. The committee on education and capacity building of the Road Safety Commission became responsible for educating and increasing the public awareness through mass media campaigns and other initiatives. Education is a key component of road safety which improves knowledge, basic skills and brings about a culture of concern. But programmes providing road safety education need to be linked and used in combination with other approaches. The Hamyare Police project was a balanced approach to the role of education and publicity. The importance of this matter can be found also from the cultural perspective of Iranians because they accept advocacy by their own family more than the by outsiders. To increase the public awareness and for capacity building among the new generation a joint program between the Ministry of Education and Iran’s traffic police started in 2006. This initiative focuses on traffic education of pupils in both public and private schools all over the country, in rural and urban places, as a long-term investment. A total of 8 million pupils throughout the country work with the traffic police in the Hamyare Police campaign.

The objectives of this intervention were to: 1) teach the traffic signs and safety rules to the children and encourage them to work as a School Pupil Police officer (Hamyare Police); 2) to advocate and encourage parents to obey the traffic rules and use the protective measures and 3) long term learning as future road users.
The main strategies were to:

1. Strengthen the spirit of legitimacy among pupils and others.
2. Strengthen the responsibility, self belief and self esteem among children.
3. Improve the capacity for respect of the law and legislation and road safety.
4. Decrease the number of road traffic victims and traffic crashes as a result of the decrease in the number of traffic faults.

The main criteria for selecting this age group was a defined accessible population with a great desire to learn. The great difference was having your own child advocating for road safety rather than the police. A shared responsibility and tendency of the Ministry of Education to play an important role in road safety was also the other reason for this decision. Although this approach was linked and used in combination with other approaches it seemed to be a winner-winner approach for both the general population and the decision makers.

The main stakeholders were the pupils in urban and rural places, their families, the teachers, parent teachers associations, academic consultants and the Ministry of Education and the traffic police under the supervision of the Road Safety Commission. The important mechanisms for establishing this partnership were the demand to pay more attention to rural places and deprived areas as a priority agenda of the government as well as in urban areas, and the existence of teachers and parents associations. In addition, collaboration between the Ministry of Education, the traffic police and the mass media was another enabling mechanism for the establishment of alliances and partnerships among the different stakeholders. This initiative was financially supported by the traffic police.

We believed that thousands of lives could be saved every year if proper control and preventive measures such as health literacy and awareness raising among peers group or among members of family are implemented, so that basic safe behaviours become standard practice in the community. In this regard primary, elementary and secondary school students in the entire country have been included as the target population in the program. The great desire among children to become involved in social issues and the tendency of parents to pay more attention to their family members including children, gives the
opportunity to policy maker to use this initiative as a policy tool.

Children had a great desire to provide their parents with information on risk taking behaviour and acting instead of police. Their interests were addressed through issuing them with police officer identification cards and awarding degrees according to their formal educational level as elaborated in the following:

1) “School Pupil Police officer (Hamyare Police) degree one” includes all the pre-school, first and second level primary school children who are responsible for enforcing the use of seatbelts, the prohibition of mobile phone use and eating and drinking during driving.

2) “School Pupil Police officer (Hamyare Police) degree two” includes all the third and forth level primary school children who are responsible for enforcing the use of seatbelts, prohibition of mobile phone use, eating & drinking and fatigue & drowsiness during driving.

3) “School Pupil Police officer (Hamyare Police) degree three” includes all the fifth level primary school children who are responsible for enforcing the use of seatbelt and compliance with speed limits (speed management) and prohibition of mobile phone use, eating and drinking, and driving while fatigued and drowsy.

4) “Adolescent School Pupil Police officer (Hamyare Police)” includes all levels of guidance school children who are responsible for enforcing the use of seatbelts and compliance with speed limits(speed management) and prohibition of mobile phone use, eating and drinking, driving while fatigued and drowsiness, speaking with other passengers during driving, and overtaking maneuvers in forbidden sites.

5) “Youth School Pupil Police officer (Hamyare Police)” includes all high school students who are responsible for enforcing the use of seatbelts and compliance with speed limits(speed management), traffic signals and prohibition of mobile phone use, eating and drinking, driving while fatigued and drawsy, speaking with other passengers, traffic violations during driving and overtaking maneuvers in forbidden sites.

The basis for training of Hamyare Police was an analysis of traffic crashes and related fines by the police showing that 70% of accidents were caused by human errors. Nine major human errors were identified
and formed the basis for training in accident prevention: 1) Exceeding legal speed limits; 2) overtaking maneuvers; 3) traffic violations; 4) mobile phone use; 5) talking with other passengers while driving; 6) driving while fatigued and drowsy; 7) not fastening seat belts; 8) eating while driving and 9) not paying attention properly to traffic signs and signals.

**Implementation**

Negotiations with national broadcasters have started to raise the awareness of the community. Pursuant to this and in line with Iranian culture, a Memorandum of Understanding (MOU) between the Ministry of Education and the police has been signed in order to train school children and ultimately the family of school children on control and preventive measures. In the first phase primary school children were selected to become School Pupil Police officers (Hamyare Police). After the MOU was signed the initiative was started. After signing the informed consent letter which was sent to the families of the students formally, and passing hours of training on the nine important human errors causing traffic accidents, the identification cards were issued and the police hats and, in some rural places the police formal dress, was given to the pupils. Their mission was to play the role of a police officer for the family and the community, with the responsibility to issue a traffic ticket with the cooperation of the traffic police during the New Year’s holidays from 21 March (beginning of the Iranian calendar) till 11 April 2006. Comparing this pilot study with the same time period last year showed a 10.4 % decrease in the number of road deaths.

Although this decline in road accidents could not be considered as entirely due to the Hamyare programme, it was considered as a successful initiative. Therefore, in the second phase guidance school and high school students were also included. Another collaborating agreement was signed between the Iran’s traffic police commander and the head of the welfare organization for the kindergartens in both rural and urban areas. In this way in the Islamic Republic of Iran children are receiving educational programs for road safety, using a variety of methods, frequently in combination. These approaches include printed material, animated films, multimedia kits, songs and other forms of musical playing.

In order to ensure sustainability of the intervention the best approach is a bottom-up one. Mobilizing community through awareness raising and sharing information has been emphasized. Community based
intervention for health improvement has different levels starting from a passive one and moving to an active one which involves decision making. This initiative in Iran started to build capacity and awareness through health promotion. A multidisciplinary and community based systematic approach was used in this experience. In addition OEC materials on school pupil police officers - Hamyare police- have been developed and disseminated.

Activities included:

- 29 meeting of the steering committee
- Eight different guidelines and SOP developed and shared with provinces
- Twelve national and provincial meetings
- National painting exhibition, photographs, books, and publications
- National training activities for 500,000 teachers to be trained as Hamyare police mentors
- Publishing and dissemination 1,100,000 copies of periodicals for different age groups
- Development, publishing, and dissemination of 8,000,000 publications among students on Hamyare police
- Distribution of Hamyare police badge, vest, and hat among students
- Developing five books on different subjects; 1) knowing to become safe; 2) little angels of travel; 3) eyes of law; 4) school, police, and traffic; 5) story by students, 5,000 copies of a book covering the work of Hamyare police.

All the financial costs were covered by the traffic police through the national governmental budget, with the rural places given priority for resource allocation in order to address inequity. The human resources in the Hamyare police mentor program were from Ministry of Education. Training of trainers (TOT) was a shared program covered by both the Ministry of Education and traffic police.

**Evaluation of results and impacts, including on social determinants and health inequities**

A before and after randomized field trial in the capital, among 2800 pupils in 6 districts, aged 8 to 15 years of age identified the role of school pupil police officers in decreasing the number of road traffic errors. This study, based on a multistage stratified sampling method, recorded a 17.9% decrease in the
number of traffic errors one year after the beginning of this initiative. Table 1- shows the demographic characteristics of the participants in this study.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean(±SD)</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mothers age</td>
<td>37.2(5.3)</td>
<td>24</td>
<td>59</td>
</tr>
<tr>
<td>Fathers age</td>
<td>42.7(5.6)</td>
<td>25</td>
<td>76</td>
</tr>
<tr>
<td>Age</td>
<td>11.3(1.7)</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>Number of family members</td>
<td>4.2(0.9)</td>
<td>1</td>
<td>10</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Degree</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary school- level three</td>
<td>481</td>
<td>17.2</td>
<td>17.2</td>
</tr>
<tr>
<td>Primary school- level four</td>
<td>521</td>
<td>18.6</td>
<td>35.8</td>
</tr>
<tr>
<td>Primary school- level five</td>
<td>482</td>
<td>17.2</td>
<td>53</td>
</tr>
<tr>
<td>Guidance school- level one</td>
<td>488</td>
<td>17.4</td>
<td>70.4</td>
</tr>
<tr>
<td>Guidance school- level two</td>
<td>503</td>
<td>18</td>
<td>88.4</td>
</tr>
<tr>
<td>Guidance school- level three</td>
<td>325</td>
<td>11.6</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Municipality Zones</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>158</td>
<td>5.6</td>
<td>5.6</td>
</tr>
<tr>
<td>4</td>
<td>885</td>
<td>31.6</td>
<td>37.2</td>
</tr>
<tr>
<td>6</td>
<td>178</td>
<td>6.4</td>
<td>43.6</td>
</tr>
<tr>
<td>8</td>
<td>554</td>
<td>19.8</td>
<td>63.4</td>
</tr>
<tr>
<td>9</td>
<td>451</td>
<td>16.1</td>
<td>79.5</td>
</tr>
<tr>
<td>15</td>
<td>574</td>
<td>20.5</td>
<td>100</td>
</tr>
</tbody>
</table>

| School type                     |           |         |                    |

The three major errors targeted by children were the use of seatbelts (39.1%), prohibition of mobile phone use (31.8%) and speed limits (29.8%). The main decrease was regarding drinking and eating while driving, there was a significant decrease in the numbers of other risky behaviors except mobile phone use.

<table>
<thead>
<tr>
<th>Fault</th>
<th>Before the intervention</th>
<th>After the intervention</th>
<th>Decrease (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eating while driving</td>
<td>41</td>
<td>3</td>
<td>92.7</td>
</tr>
<tr>
<td>Violation</td>
<td>9</td>
<td>4</td>
<td>55.6</td>
</tr>
<tr>
<td>Not mentioning the traffic signs and signals</td>
<td>1284</td>
<td>848</td>
<td>34</td>
</tr>
<tr>
<td>Exceeding speed limits</td>
<td>293</td>
<td>238</td>
<td>18.8</td>
</tr>
<tr>
<td>Overtaking manoeuvres</td>
<td>107</td>
<td>89</td>
<td>16.8</td>
</tr>
<tr>
<td>Not fastening the seat belt</td>
<td>977</td>
<td>880</td>
<td>9.9</td>
</tr>
<tr>
<td>Mobile phone use</td>
<td>118</td>
<td>191</td>
<td>-61.9</td>
</tr>
<tr>
<td>All</td>
<td>2789</td>
<td>2290</td>
<td>17.9</td>
</tr>
</tbody>
</table>

(Source: Dr. Soori, et al. The role of school pupil police officers in decreasing the number of traffic faults, Payesh Scientific Journal of Iranian Institute for Health Science, Persian)
A majority (85.9%) of parents had a positive reaction to their children’s recommendations, 11% didn’t react and 3% didn’t accept their children’s advocacy. There were no significant difference between the effectiveness of this initiative regarding sex, level of Hamyare police and school type. The rapid increase in the number of mobile phone users was the reason for the lack of success in decreasing this faulty behaviour. The number of registered mobile phones increased from 15385289 in 2006-2007 (Iranian calendar from 21 March 2006 till 21 March 2007) to 24509714 in 2007-2008.

The school pupil police officer (Hamyare police) initiative was one of the research priorities in the Traffic Police Research Center. The University of Police provided student grants for evaluating the input, process, outcome and impact measures of this initiative. The implementation was documented by both the Ministry of Education and traffic police. It was evaluated by the Safety Promotion and Injury Prevention Research Center in Shaheed Beheshti University of Medical Science.

A 17.9% decrease in the number of traffic errors within one year of the beginning of this initiative was the main measurable change of this initiative. We hope this kind of community based initiatives can address health inequity in the country. This community based initiative was piloted during the New Year’s holidays (20 days) in 2006. Comparing this pilot study with the same time period last year showed 10.4 % decrease in the number of road traffic deaths, although this decrease was not considered as solely due to the initiative, it led to the second phase including guidance for school and high school students.

Follow up and lessons learned

The main limitation in this bottom-up community based initiative was financial. The high cost of TV commercials, provided without any subsidy, for public awareness and educational programs was the main barrier for raising the public awareness in our country. The number of deaths or injured is not disaggregated by socio-economic status and a lack of proper indicators in place for measuring death per 10,000 kilometer travel must be taken into consideration in further evaluations to improve roads safety.
The school pupil police officer (Hamyare police) is an ongoing successful program and a good practice for different countries to implement although it is an ambitious vision. Increased investment and better collaboration are needed. The sustainability of the process is shown by its continued existence from 2006 till now. However, a longer term evaluation is necessary to confirm the sustainability of results.

Current initiatives and levels of investment are inadequate to halt or reverse the predicted rise in road traffic deaths. In addition to education and public awareness, the Road Safety Commission needs to encourage more walking and/or cycling and support more investment on public transport as alternatives for car travel. We need to encourage the use of child restraints through loan or borrowing schemes and approve national legislation to enforce the use of child restraints. The poverty and number of children is another social determinant of health which needs to be addressed, although loans are available for cars, they are not available for families to purchase child restraints.

An international consequence of the project was that the traffic police of the Islamic Republic of Iran won a bronze award in the international safety media awards, using training materials for school pupil police officers.