Presenting a practical model for governmental political mapping on road traffic injuries in Iran in 2008: a qualitative study

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Summary

Objectives This study was conducted to assess political mapping in relation to road traffic injuries (RTIs) management and prevention to present a practical model for RTIs.

Design A phenomenological qualitative study was developed to identify stakeholders on RTI in Iran in 2008.

Setting The designed questions were discussed by systematic discussion with the relevant specialists. After receiving written consent from the main responsible stakeholders, the questionnaire was filled in by trained experts. Themes were determined and content was analysed in each part.

Participants Main responsible stakeholders.

Main outcome measures By comparing other countries’ political mappings which were found in the library and by Internet searching, political mapping of RTI in Iran was suggested.

Results Subjects were 26 experts from governmental and non-governmental organizations. The main proposed leading agencies were traffic police and presidency (13% each). Findings showed that only 31% of our political mapping was formed according to the World Health Organization (WHO). In 94% of cases, the involved organizations had unspecified roles; the reason was poor monitoring for RTI in 39% of organizations. Lack of adequate authority and suitable legislation, appropriate laws and tasks definition were 94% and 18%, respectively. The most essential policy to overcome problems was defined as appropriate legislation (21%), and the most frequent type of support needed was mentioned as adequate budgeting (25%).

Conclusion Traffic police can play the leading agency role by government support, with strong leadership, appropriate legislation, defined tasks and adequate budget.

Introduction

Some injuries are predictable and preventable events, and are one of the most important public health challenges in terms of the socioeconomic burden, especially in developing countries. Nearly 6 million individuals lose their lives annually (2 million due to non-intentional injuries,
4 million to intentional injuries) and 1.2 million are due to road traffic injuries (RTIs). The statistics of RTI in Iran is approximately 25,000 per year and as many as 70 per day. Sadly there are more than 10-fold this number in injuries which cause disabilities; overall 2271 years of life are lost costing over US$6 billion in damages. The rate of death caused by RTIs is three people per 10,000 vehicles in the world; while in Iran it is 33 per 10,000. Unfortunately, this loss is increasing every year. However, in recent years, a reduction in the rate of deaths from RTIs has been observed; this is likely to be due to the measures taken including development education, increasing the police budget, safety for vehicles, road safety, intelligent control, television monitoring using closed-circuit cameras, increased penalty rates, development aid and rescue, special deals for violation and speed, encouraging safer driving, improved medical care, expanding public transport, infrastructure development, especially in the rail section. According to NAJA (Iranian police) statistics, some activities such as high-speed encounters, increasing vehicle safety and the rate of penalty increasing the average rate and in other indicators have not been reported very much. In countries which succeed in preventing road traffic problems, one organization has complete authority, which plans and performs activities that reduce traffic accidents. Moreover, all related organizations cooperate and work under their umbrella. For example, in Canada, the federal government and provincial levels of government territory are pioneers in road safety. The federal government role in the transport system has full authority; gathering information and conducting research and development and evaluation of this system. The police have an executive role working alongside with the justice department; developing programmes that contribute to safety. Various diverse organizations were involved in RTI prevention in Iran. This caused repeated workload, duplication of work and in some cases interference with tasks. Policies in the prevention and control of traffic injuries in the country had no specific political map or guideline. Designing an appropriate political map was the first step required to absolve the predicament. Hence this study was conducted not only to assess political mapping in Iran, but also present a practical model on the state of RTIs.

Material and methods

A phenomenological qualitative study was developed to identify stakeholders on RTIs in Iran in 2008. Designed questions were discussed systematically. An initial group of professional and academic expert and police sector stakeholders’ traffic injuries were identified and actions discussed. According to expert opinion, stakeholders included the Ministry of Roads and Transport, Ministry of Industry, Deputy Health Ministry of Health, traffic police, the Ministry of Culture, Ministry of Education and Development, forensic medical experts, the Main Insurance, Ministry of Justice, Ministry of Interior, Red Crescent, the emergency state police, media broadcasting and the judiciary. Non-registered organizations in the questionnaire included the Parliament, Road Police, welfare organizations, rescue committee, firefighters, municipality, deputy Planning Monitoring and strategic President, non-governmental organizations (NGOs), institution of the presidency and statistics centre as beneficiary organizations. After receiving written informed consent from main responsible stakeholders, the questionnaire was filled in by trained experts about the rationale of the study and responses were analysed. After data collecting, themes were determined and contents were analysed. These results were evaluated and cumulated with the political mapping of other countries (found by library and Internet searching) and subsequently a political mapping of RTIs in Iran was suggested (Figure 1).

Results

Subjects included 26 experts from governmental and non-governmental organizations. Table 1 shows the number and percentage of RTI stakeholders of the authorities and relevant organizations. The highest percent (100%) was observed among transportation ministry officials, traffic police and ministry interiors portal. Table 2 shows the number and percentage of the proposed organization for the administration and prevention of road traffic injuries. The main proposed leading agencies were traffic police and presidency (13% each). Results showed that only 31% of our political mapping is in accordance with the approaches of
According to findings, 94% of those organizations which were involved in RTIs had unspecified roles, moreover poor monitoring was evaluated to be as high as 39%. Lack of adequate authority and suitable legislation, as well as appropriate laws and tasks definition were 94% and 18%, respectively. Table 3 shows the suggestions that will resolve inadequacies of main responsible stakeholders’ organization in policymaking and planning prevention of RTIs. Based on these findings to resolve shortcomings, the correction of related laws and determine the duties was the highest percent at 21%. Table 4 shows the type of support for the organization which was responsible for (a fabric management of traffic and road traffic). The highest percentage was funding requirement at 25%.

Table 5 shows the number and percentage of recommendations to integrated management. According to the results, the highest and lowest percentage were traffic engineering and the management of all parking at 81% and 50%, respectively.

**Discussion**

The findings showed that traffic police by presidential support was the most appropriate organization to administer and prevent road traffic injuries in the country. According to stakeholders’ opinions, ministry of road and transport, the
traffic police and ministry of interior’s portal had major roles compared to other interested organizations. The role of 94% of those organizations which were involved in RTIs was uncertain. Less than one-third of involved RTI policymakers were in line with the WHO approach. Organizations did not have sufficient vital powers to administer and prevent RTIs in the country.

Table 1
Frequency (n, %) of road traffic injuries. Stakeholders, authorities involved organizations

| Organization                        | n    | %    |
|-------------------------------------|------|------|
| Ministry of roads and transport     | 16   | 100  |
| Ministry of industries              | 15   | 94   |
| Ministry of health                  | 13   | 81   |
| Traffic police                      | 16   | 100  |
| Ministry of science higher training | 15   | 94   |
| Ministry of education               | 13   | 81   |
| Forensic medicine                   | 14   | 88   |
| Central insurance organization      | 15   | 94   |
| Ministry of justice                 | 12   | 75   |
| Ministry of interior                | 16   | 100  |
| Red crescent                        | 14   | 88   |
| Emergency                           | 15   | 94   |
| Police                              | 14   | 88   |
| Media broadcasting                  | 13   | 81   |
| Judiciary                           | 12   | 75   |

Table 2
Frequency (n, %) of the suggested organization to be the leading agency in prevention of RTIs according to stakeholder authorities’ organizations

| Proposed organization               | n    | %    |
|-------------------------------------|------|------|
| Traffic police                      | 12   | (13) |
| Presidential institution            | 12   | (13) |
| Ministry of interior                | 10   | (11) |
| All agencies                        | 8    | (9)  |
| Parliament                          | 8    | (9)  |
| Cabinet                             | 8    | (9)  |
| Ministry of roads and transport     | 6    | (7)  |
| Judiciary                           | 5    | (6)  |
| Council policymakers                | 4    | (4)  |
| Management and planning organization| 4    | (4)  |
| Ministry of health                  | 3    | (3)  |
| Ministry of transportation           | 2    | (2)  |
| Safety of roads organization         | 1    | (1)  |
| A company with full powers           | 1    | (1)  |
| An organization responsible for the prevention of disaster and war | 1 | (1) |
| Ministry of science                 | 1    | (1)  |
| Ministry of industries               | 1    | (1)  |
| Road safety commission               | 1    | (1)  |
| Leadership institution               | 1    | (1)  |
| **Total**                           | 89   | (100)|

Table 3
Frequency (n, %) of the suggestions proposed to resolve the inadequacies of planning and prevention of RTIs

| Suggestions for resolving deficiencies | n    | %    |
|----------------------------------------|------|------|
| Correction related laws and determine the duties | 8 | (21) |
| Credit allocation necessary            | 5    | (12) |
| Careful planning and coherent          | 4    | (10) |
| Sensitive authorities                  | 3    | (8)  |
| Unique management                      | 3    | (8)  |
| Doing Research to achieve accurate statistics | 3 | (8) |
| Determine organization responsible for | 3    | (8)  |
| Inter-agency coordination              | 2    | (5)  |
| Economic and commercial relationship, especially in the construction process of prevent vehicles | 2 | (5) |
| Using the experiences of the world     | 1    | (3)  |
| Formation of road safety               | 1    | (3)  |
| Capabilities of the country and national commitment | 1 | (3) |
| Construction and road development      | 1    | (3)  |
| Drivers’ training                      | 1    | (3)  |
| **Total**                              | 38   | (100)|

Table 4
Frequency (n, %) of required advocacy type organization according to the authorities responsible for stakeholders’ organizations

| Type of support                        | n    | %    |
|----------------------------------------|------|------|
| Funding requirement                    | 9    | (25) |
| Appropriate legislation                | 8    | (22) |
| Government support, the house (the three branches of the organization responsible) | 5 | (14) |
| Give carte blanche to the organization | 4    | (11) |
| Judicial support for implementation    | 4    | (11) |
| Providing specialist manpower          | 2    | (5)  |
| Public education                       | 1    | (3)  |
| Media support                          | 1    | (3)  |
| Insurance protection                   | 1    | (3)  |
| Definition of organizational position  | 1    | (3)  |
| **Total**                              | 36   | (100)|
Lack of appropriate legislation was the reason for weak policymaking. Rectification of laws and determining and allocating responsibility was suggested to eliminate shortcomings. Financial support was deemed the most important criteria for each organization as a leading agency. The management of traffic engineering was the more highlighted in the concrete management. Establishing an organization with structural consultation by presidential support was suggested by authorities of stakeholders. World Health Organization Day for RTI prevention was held on 7 April 2004. The content of declaration included public health and prevention to reduce mortality, hospitalization cases, and environmental risk factors and design information. Haddon Matrix was focused on human factors, vehicles and the environment. In the city environment, organizations involved were: municipality, transport and traffic organizations, traffic police, legal medicine. In the suburbs, the organizations were: ministry of roads and transport, traffic police. In human injury and their prevention, the organizations were: the ministries of education, media broadcasting were involved. Following an accident, the central insurance company, judiciary and Ministry of Health were involved. The Ministry of Industries was involved in evaluating vehicles. The above structure indicates that there was no clear guidance and structural control of traffic accidents in the country. In some countries such as Sweden, which was successful in RTI reduction and control, there was a clear structure on policymaking and specific strategic planning with annual targets which have reduced significantly the rate of traffic injuries. In other countries such as Canada, the federal government had activities at governmental and provincial levels and played its role as the leading agency. The federal government was supported by traffic police and justice with cooperation of other relevant agencies to control traffic injuries. In South Africa, the National Department of Transportation was responsible for the coordination of RTIs. An advisory group consisting of the ministry of information and security, justice, industries, business, health and education in support of the ministry was working. Traffic police and transport organization play a major role as leading agencies in Sri Lanka. In Iran traffic injury stakeholders were the ministry of health, education, department of labour, university physical education organizations and members of the city council; these stakeholders were supported by the WHO. In Vietnam, the national government was responsible for managing traffic injuries and acted according to strategic planning. In Royal Oman the police organization and coordination was effective. The Australian government and police were active in the control of traffic injuries. They were also supported by NGOs.

Once the maps of other nations were analysed, a suggested policy on RTIs suitable to Iran was drawn and sent to specialists who were asked to evaluate the map. All specialists unanimously agreed to the devised map.

**Conclusion**

Based on the above findings we can conclude that Iran requires a strong authoritative traffic police, appropriate legislation, well-defined tasks and duties as well as adequate budget, in line with the WHO approach, all backed by the government. All the stakeholders are in line with the WHO approach have protective roles as the consultant group in Iranian political mapping for RTIs.

**References**

1 World Health Organization. *World report on road traffic injury prevention*. Geneva: WHO, 2004. See [http://whqlibdoc.who.int/publications/2004/9241562609.pdf](http://whqlibdoc.who.int/publications/2004/9241562609.pdf)

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**Table 5**

| Frequency (n, %) of recommendations for integrated management according to officials in interested organizations |
|--------------------------------------------------|
| Injuries                                      | 12 (75) |
| Standardization                               | 12 (75) |
| Immediate service                             | 11 (69) |
| Research and development                       | 9 (56)  |
| Traffic engineering                            | 13 (81) |
| Mechanization of the network traffic IT         | 12 (75) |
| Public transport network                       | 10 (63) |
| Building culture traffic                       | 11 (69) |
| City building                                 | 1 (7)   |
| Parking                                       | 8 (50)  |
| Traffic safety                                | 12 (75) |
| Urban travel                                  | 9 (56)  |
| Traffic health                                | 10 (63) |
2 Naghavi M. Pattern of mortality in 23 provinces of Iran 4th edn. Tehran: Ministry of Health, 2005
3 Mental Health Unit. Mental health of injury and accident. Payam Helal 2005;6:105
4 Nikzad F. First book in road traffic injury and its damages, causes and suggestions for prevention of outcomes [in Persian]. Tehran: Asas Publishers, 2006
5 Canadian Council of Motor Transport Administrators. Road Safety Vision 2010. Annual Report 2002. Ottawa: CCMTA, 2004
6 Margie P, Richard S, David S. World report on road traffic injury prevention. Geneva: WHO, 2004
7 World Health Organization. Department of Injuries and Violence prevention E/CN.4/2003/75/Add.1 Geneva: WHO, 2003. See www.who.int/injury/prevention/europe/2004-pedestrians/en/
8 Road safety information, education and tips. See www.arrivealive.co.za
9 World Health Organization. National Policy Framework on injury prevention in Sri Lanka. Geneva: WHO, 2005
10 Decision No. 197/2001/QD-TTg of ratifying the 2001–2010 National policy for accident and injury prevention and fight 2001. Socialist Republic of Vietnam, December 27, 2001
11 National Society for Road Safety. What does NTF think? Policy. Solna: NTF, 2006
12 Australian Transport Council. National Road Safety Strategy. Canberra: ATC, 2010. See http://www.atcouncil.gov.au/documents/atcrrss.aspx