

Original Article

Trauma Research in Iran: A Report of the Sina Trauma Data Bank

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Background: Injuries are a major health problem in developing countries. Recently, the occurrence of injuries and those related to mortality have increased dramatically in Iran. We have conducted this study to report domestic research publications in the field of trauma from 2000 to 2006 in Iran.

Methods: The contents of 128 biomedical journals were analyzed. Sina Trauma Data Bank (STDB) was selected as an indicator of trauma related articles that have been published in Iranian biomedical journals.

Results: The number of trauma related articles in Iran increased during the seven year period (2000 – 2006), but the percentage of total publications was not significantly different. The mean number of authors per article was 2.7+1.3 (1 to 12) and all first authors were Iranian. Females constituted 15.4% (n=156) of first authors. Original articles were the most frequently published articles (n=871; 86.2%). Treatment of injuries and ensuing complications were the most common topics (42%) followed by war injuries (14.1%). Traffic accidents, as the leading cause of trauma death in Iran, were investigated in 27 (2.7%) articles.

Conclusion: According to our results, it seems that more attention from researchers and health-policy makers towards trauma is necessary in our country. In addition, publishing a journal with the main theme of injury and trauma could be an effective means for increasing the proportion of trauma related articles.

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Introduction

Injuries are an important public health problem and a leading cause of death and disability among adults and children. This high burden is due to the fact that injuries affect the young population who are in the period of their maximum productivity.^{1,2}

It is estimated that injury deaths will increase to 8.4 million in 2020, up from 5.1 in 1990 with traffic accidents as the prominent cause.³

The importance of injury and its consequences

is incompletely understood and it is often neglected in health research and policy.⁴

In recent years, the incidence of injuries and its related mortality has increased dramatically in Iran.^{5,6} In fact, injuries are the second cause of death after cardiovascular disease and the first cause of years of life lost (YLL) in Iran.⁶

The bulk of research in the field of trauma has been growing in our country. Nevertheless, a considerable proportion of trauma related articles in Iran are published in national Iranian journals which are not indexed in Medline and thus are not available to other researchers with similar interests. The Sina Trauma Data Bank (STDB) has been developed to overcome this deficiency. This databank comprises abstracts of published trauma related articles in Iranian biomedical journals.⁷ We have conducted this study to report on national research publications in the field of trauma in Iran from 2000 to 2006.

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Materials and Methods

The present study was conducted in March 2008 using the Sina Trauma Data Bank (STDB). This database has been developed by the Sina Trauma and Surgery Research Center (STSRC) and includes abstracts of published trauma and injury related articles in Iranian biomedical journals.

For this purpose, injury was defined as follows: physical damage resulting from exposure of the human body to energy in amounts that exceed the threshold of physiological tolerance, or from a lack of one or more vital elements. The energy could be mechanical, thermal, chemical or radiant.⁸

STDB is available online at www.sinatrc.ac.ir/stdb/htm for free. Article searching is provided through a variety of terms including title, abstract, author(s), journal name, keyword(s), ISSN, publication type and language. It is possible to search for single or multiple items within any specific category.

The Iranian Ministry of Health and Medical Education has approved 128 biomedical journals for publishing medical papers in Iran. Of these, three journals are indexed in Medline (Archives of Iranian Medicine, Urology Journal, Iranian Journal of Allergy, Asthma and Immunology). The abstracts of all papers published in these 128 journals are indexed in STDB.

Since our data bank has complete coverage of all the issues of Iranian medical journals from 2000 through 2006, a seven year period, we considered

this time frame for our investigation. The collected information included: number of articles in each issue, field of journals, publication type, journal language, subject of papers, year and issues of articles, number(s) of authors and author gender.

Results

Of the 28,880 published articles in Iranian biomedical journals during this seven year period, 1010 (3.5%) were trauma related. The number of trauma-related articles has shown an increasing trend (Figure 1), but the percentage of total publications was not significantly different. The majority of articles were in Persian (Farsi) (90.4%) and the others were published in English (96; 9.6%). Out of 128 journals, 32 (25%) were in English. The mean number of authors per article was 2.7 ± 1.3 (1:12) and all first authors were Iranian. Females constituted 15.4% ($n=156$) of first authors meanwhile, 13% (360) of the total authors were female. Original articles were the most frequently published ($n=871$; 86.2%). Management of injuries and its complications were the most common topics of the published papers (42 %; Table 1). Apart from this group, the main subject was war injuries and its complications which were seen in 142 (14.1%) articles. Injuries resulting from exposure to chemical gases have been reported in more than 48.6% (69/142) of the war-related articles. Traffic accidents were investigated in 27 articles (2.7%). No papers were found on drowning accidents. Injuries in children were discussed in 78 articles (7.8%). From 128

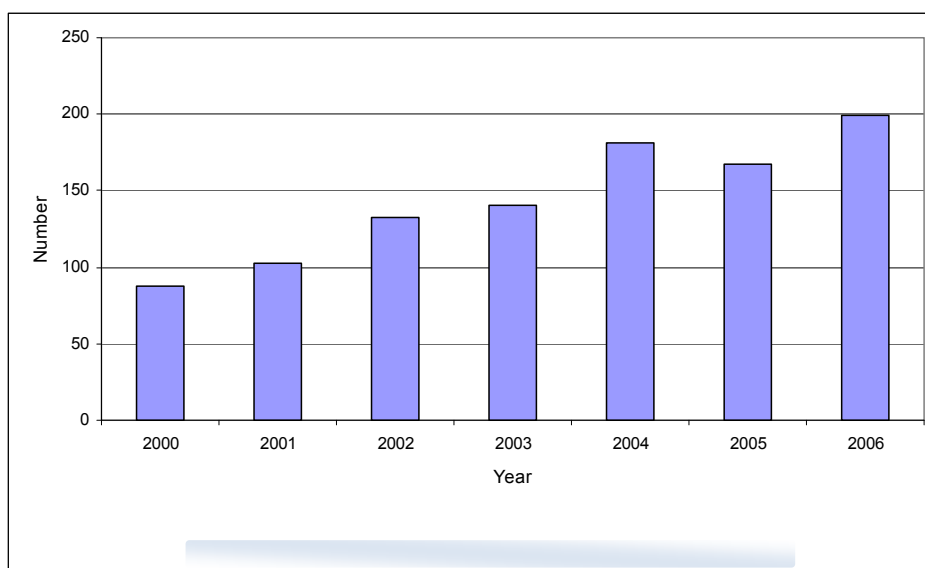


Figure 1. Trends of trauma-related articles publishing in Iranian Journals

Table 1. Subject of trauma related articles in Iran (2000 – 2006)

| Subject | Frequency (%) |
|------------------------|---------------|
| Burns | 47 (4.7) |
| Dental injuries | 12 (1.2) |
| Disaster | 33 (3.3) |
| Fall | 2 (0.2) |
| Firearm | 5 (0.5) |
| Foreign body | 25 (2.5) |
| Management* | 425 (42) |
| Miscellaneous | 66 (6.3) |
| Mortality | 8 (0.8) |
| Noise induced injuries | 11 (1.1) |
| Poisoning | 58 (5.7) |
| Psychological | 4 (0.4) |
| Road traffic crashes | 27 (2.7) |
| School injuries | 2 (0.2) |
| Trauma scoring system | 4 (0.4) |
| Sports injuries | 7 (0.7) |
| Violence | 107 (10.7) |
| War injuries | 142 (14.1) |
| Work related injuries | 25 (2.5) |
| Total | 1010 (100) |

*Articles that have discussed the treatment of injuries in trauma patients without emphasis on the mechanism of injury

biomedical journals, 27 (21.1%) did not publish any trauma-related articles. Overall, 76 (59.4%) of the journals' publication offices are located in Tehran, the capital of Iran. No journal exists with the main theme of trauma and/or injury in Iran.

Discussion

During the past few years, there has been an increasing trend in the number of published articles in the field of trauma and injury in our country. This was consistent with previous reports that, in recent years, Iranian medical articles have undergone a steady growth.⁹ Though publication of trauma related articles has recently enjoyed a remarkable growth, their share of total publications has not significantly increased during the last seven years. There has been an obvious reduction in the number and percentage of trauma articles for the year 2005; however, the reason was not clear.

Our results have shown that traffic accidents and burns comprise respectively 2.7% and 4.7% of trauma related articles in Iran. On the other hand there were no reports on drowning, the third most important cause of trauma death in Iran. During the past ten years, at least 1,100 drowning deaths have been reported annually. On the other hand, there were only two articles that discussed injuries resulting from falls.

Apart from management of injuries, war-related injuries were the most common topic in the

trauma-related articles. Meanwhile, over half of the war-related articles reported injuries in victims of chemical gas exposure.

Injuries in children were discussed in 78 articles (7.8%) and school injuries have been reported in two (0.2%) articles. Meanwhile, children comprised nearly one-third of our population in 2007, with nearly 14,000,000 school children.¹⁰

The majority of published articles were in Farsi. Although all of them have an English abstract, this could be a problem in sharing the information with other countries.

According to the above; it seems that there are two important facts regarding trauma research in Iran. First, the proportion of trauma related articles does not appear to be appropriate in comparison to its rank as the national's first public health priority. It is doubtful that this unremarkable share of trauma related articles could be satisfactory for injury prevention and control. This might be an indicator that the importance of injuries is not acknowledged by investigators, research funding bodies and health policy makers.

Secondly, it seems that medical researchers in the field of injuries in Iran spend their resources investigating unnecessary areas that are not the highest priorities as far as the health issues of the nation are concerned.

In addition, there is not a journal that specifically focuses on trauma and injuries in Iran. The present journals have different areas and priorities for accepting papers, of which trauma might be or might not be on the list. Thus publication of a journal that accepts articles in the field of trauma and injury could be an effective step in improving both the quality and quantity of trauma related articles in Iran.

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