

# Interpersonal Violence Related Injuries in Central Anatolia, Turkey

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## Citation

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## Abstract

The objective of present study was to describe the characteristics of violence related injury cases admitted to the Emergency Department, and to assess factors related to injury severity and hospital admission in the Central Anatolia Region. All the cases presented with injuries associated with violence between January and December 2008, were included in the study. Information concerning the demographic characteristics of the patients was recorded; injury sites, types, clinical characteristics. Of the total, 83.6% of the cases were male. Mean age was  $31 \pm 12$ . Most commonly encountered injury sites were head-face-neck region in 67.1% of the cases. As 15.1% of the cases had a severe injury, 84.9% had slight injuries. Most of the violence-related injuries in our region are seen among ages 21-30 as a result of bodily force causing soft tissue injuries in the head-face-neck area. However, ED staffs also encounter cases with a wide range of injuries.

## INTRODUCTION

Violence has generally been regarded as an aspect of human aggression.<sup>1</sup> Economic, cultural, and psychological factors were the most prevalent causes of violence.<sup>2</sup> Interpersonal violence is a growing problem in the developing world and also in Turkey.<sup>12</sup> Violence-related injuries are usually admitted to the emergency services (EDs), and vary from minor abrasions and bruises to multi-system trauma that can result in death.<sup>345</sup> Each year millions of people die worldwide, as the result of injuries due to violence.<sup>6</sup>

Interpersonal violence is particularly difficult to assess, because of stigma related to its reporting and lack of accuracy of non-healthcare epidemiological sources.<sup>7</sup>

Although this phenomenon recently aroused mainstream interest in worldwide, there are very few studies in Turkey. The primary objective of this study was to underscore the importance of those injuries in our country by describing characteristics such as injury severity, types of injury, mechanism, and site as well as age, gender, fatality, and hospitalization rates.

## MATERIALS AND METHODS

The present retrospective study was performed in the Emergency Department of XXXX University Hospital which is located in Central Anatolia Region of Turkey and recognized as the reference hospital of the region for trauma

patients while serving approximately 4 million people.

All the cases admitted with violence-related injuries between January 2008 and December 2008, were included in the study. Gun-shot injuries and stubbing injuries were excluded from the study. The Ethics Committee of Medical School approved the study. A pre-designed form for the patients admitted due to violence-related injuries was filled out. Information concerning the demographic characteristics of the patients such as age and gender was collected.

Injury sites, injury types, and clinical characteristics of all the cases were recorded; injury severity scores (ISS) were calculated.

Descriptive statistics about the number of patients, percentage of the total, mean, standard deviation (SD), and range were used to evaluate the data. Statistical analysis was performed using Statistical Package for Social Sciences, version 11.0.1 (SPSS Inc., Chicago, IL, USA).

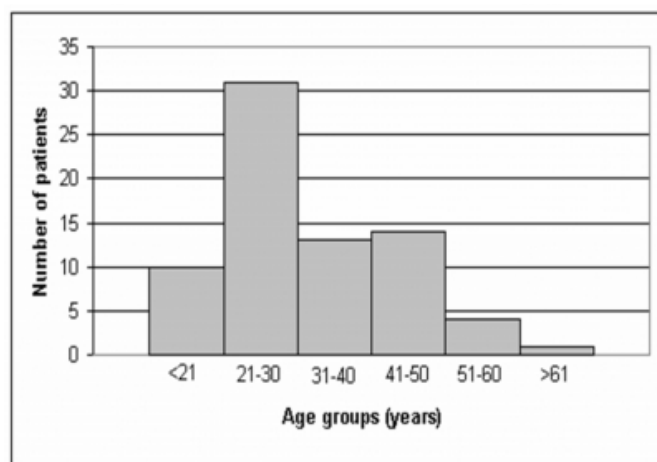
## RESULTS

A total of 73 adult patients were admitted due to violence-related injuries during the study period. The mean age of the patients was  $31 \pm 12$  years (17-66). 61 of the patients (83.6%) were male and 12 (16.4%) female. The peak incidence occurred in the age group of 21 to 30 years, which constituted 42.5% of all cases (Figure 1). 47 (64.4%) of the injured patients were brought to our Emergency Department

via an ambulance service.

**Figure 1**

Figure 1. Age distribution of violence related injury



The most common objects causing injury was thump in 41 cases (56.2%). Violence-related injuries caused objects are shown in Table 1.

**Figure 2**

Table 1. Distribution of objects that lead to injury

Object	%	Cases (n)
Thump	56.2	41
A Blunt instruments*	19.2	14
Kick	8.2	6
Thump and kick	6.8	5
Thump and blunt object	4.1	3
A Sharp instruments**	2.7	2
Thump, blunt object and blunt object	1.4	1
Other***	1.4	1

\*Bat, stone, chock.

\*\* Glass piece, adze, iron stick.

\*\*\*Head to.

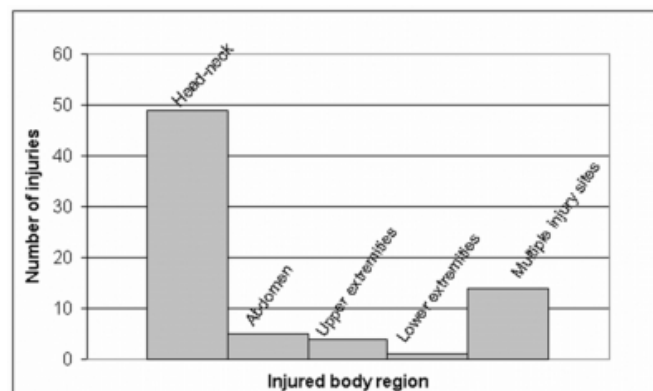
Most common assailants were unascertained person in 30 (41.1%) cases, close-friends in 19 (26%), relatives in 9 (12.3%), neighbors in 9 (12.3%), and family members in 6 (8.2%) cases.

Most commonly encountered injury sites were head-neck region in 49 (67.1%) cases and abdomen in 5 (6.8%) cases

(Figure 2). 14 (19.2%) cases demonstrated multiple injury sites.

**Figure 3**

Figure 2. Affected body regions.



As 38.4% of the injuries had tenderness, 26% had haematoma/bruise, 24.7% had laceration/cut, and 11% had epistaxis (Table 2). A life threatening injury was present in 8.2% of the patients.

**Figure 4**

Table 2. Types of injuries associated with violence related injuries.

Injury	%	Cases (N)
Tenderness	38.4	28
Haematoma/bruise	26	19
Laceration/cut	24.7	18
Epistaxis	11	8
Head injury	9.6	7
Limb fracture	6.8	5
Nasal bone fracture	6.8	5
Facial bone fracture	5.5	4
Dislocation	1.4	1
Life-threatening injuries	8.2	4
Cranial fracture		2
Hemopneumothorax		1
Rib fracture		1
Intracranial hemonhage		1
Sternum fracture		1

Mean ISS score of the cases was  $7.7 \pm 7.1$ . 11 (15.1%) of the

cases had a severe injury (ISS  $\geq 15$ ), and 62 (84.9%) had slight injuries (15