

## Changing trends in unnatural deaths of medico legal importance

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### Abstract

The basic fundamental aspect of the human development is the potential of the individual to live a long and healthy life. Periodic statistical evaluation of the changing trends of unnatural deaths will provide valuable data to adopt effective preventive measures in this respect. The aim of the present research is to retrospectively study the prevalence and the changing trends in the unnatural deaths in and around Kakinada during the period of two years from January 2015 to December 2016 in the department of Forensic Medicine & Toxicology, Rangaraya Medical College, Kakinada, Andhra Pradesh.

**Keywords:** Changing trends, Retrospective research, Statistics, Unnatural deaths.

### Introduction

Deaths may be accidental, suicidal and homicidal or remain undetermined.<sup>1</sup> The term “unnatural death” has been defined U/s 174 Cr.P.C, as that a person has committed suicide or he has been killed by another or he has been killed by an animal or by a machinery or an accident or the person has died under circumstances raising a reasonable suspicion that some other person has committed an offence.<sup>2</sup> Pattern of unnatural deaths is a reflection of the socio-economic status and mental health of the society.<sup>3</sup> In India, in less than every five minutes one person dies due to Road Traffic accidents.<sup>4</sup> Crime rate in the society are directly linked to the illiteracy and poverty of the community.<sup>5</sup>

### Aim of the Study

The main objective of this present retrospective statistical research is to study the pattern and the changing trends in unnatural deaths of Medico - Legal importance in and around Kakinada, Andhra Pradesh.

### Materials and Methods

The sample size for the present study consisted of the cases brought for autopsy to the Department of Forensic Medicine & Toxicology, Rangaraya Medical College, Kakinada, Andhra Pradesh, during a period of two [2] years i.e., from January 2015 to December 2016. Deaths due to natural causes such as myocardial infarction were excluded from the study.

### Results and Observations

The total number of the cases during the calendar year of 2015 is 1041.

The total number of the cases during the calendar year of 2016 is 1016.

The total number of the cases during the total study period of two [2] years was 2057.

During 2015,

Head Injury Cases consisted of 37.36 % of cases.

Poisoning cases consisted of 19.69 % of cases.

Burns cases consisted of 10.95 % of cases.

Polytrauma cases consisted of 6.82 % of cases.

Hanging cases consisted of 4.32 % of cases.

Septic Burns cases consisted of 2.01 % of cases.

Drowning cases consisted of 4.61 % of cases.

Blunt injury to Trunk cases consisted of 1.53 % of cases.

Spinal injury cases consisted of 1.92 % of cases.

Snake bite cases consisted of 1.53 % of cases.

Crush injury cases consisted of 1.44 % of cases.

Throttling cases consisted of 0.57 % of cases.

Electric Shock cases consisted of 0.86 % of cases.

Sunstroke cases consisted of 0.49 % of cases.

Miscellaneous causes consisted of about 5.85 % of total cases.

During 2016,

Head Injury Cases consisted of 33.46 % of cases.

Poisoning cases consisted of 18.01 % of cases.

Burns cases consisted of 14.56 % of cases.

Polytrauma cases consisted of 6.29 % of cases.

Hanging cases consisted of 6.20 % of cases.

Septic Burns cases consisted of 2.75 % of cases.

Drowning cases consisted of 2.65 % of cases.

Blunt injury to Trunk cases consisted of 2.36 % of cases.

Spinal injury cases consisted of 2.26 % of cases.

Snake bite cases consisted of 1.47 % of cases.

Crush injury cases consisted of 1.18 % of cases.

Throttling cases consisted of 0.68 % of cases.

Electric Shock cases consisted of 0.68 % of cases.

Sunstroke cases consisted of 0.49 % of cases.

Miscellaneous causes consisted of about 6.59 % of total cases.

**Table 1:**

Year : 2015		
Cause of death	No. of Cases	Percentage of cases
Head injury	387	37.36
Polytrauma	71	6.82

Spinal injury	20	1.92
Crush injury	15	1.44
Blunt injury to trunk	16	1.53
Poisoning	205	19.69
Burns	114	10.95
Septic Burns	21	2.01
Drowning	48	4.61
Hanging	45	4.32
Throttling	6	0.57
Snake bite	16	1.53
Dog bite	3	0.28
Electric shock	9	0.86
Sunstroke	4	0.38
Miscellaneous	61	5.85
Total no. of cases	1041	100

**Table 2:**

Year: 2016		
Cause of death	No. of Cases	Percentage of cases
Head injury	340	33.46
Polytrauma	64	6.29
Spinal injury	23	2.26
Crush injury	12	1.18
Blunt injury to trunk	24	2.36
Poisoning	183	18.01
Burns	148	14.56
Septic Burns	28	2.75
Drowning	27	2.65
Hanging	63	6.20
Throttling	7	0.68
Snake bite	15	1.47
Dog bite	3	0.29
Electric shock	7	0.68
Sunstroke	5	0.49
Miscellaneous	67	6.59
Total no. of cases	1016	100

### Discussion

Statistical data for analysis of unnatural deaths in society is the significant parameter of mental health and socio-economic status of the society. Head injuries and polytrauma as a result of accidents are major contributors of mortality due to unnatural causes. Safe driving practices and secure industrial operations must be adopted. Effective availability of emergency medical services must be provided to prevent the loss of youth capital of country. Enhanced employment chances in the youth diminish their frustration and criminal intentions. Improving the literacy rate and providing moral education to our youth will undoubtedly lead to decreased homicidal and suicidal death rates.

### Conclusion

Increased incidences in deaths due to the following causes were noted in the year 2016 when compared with those in the year 2015:

1. Spinal injury (increased by 0.34%)
2. Blunt injury chest (increased by 0.83%)
3. Burns (increased by 3.61%)
4. Septic burns (increased by 0.74%)
5. Hanging (increased by 1.88%)
6. Throttling (increased by 0.11%)
7. Dog bite (increased by 0.01%)
8. Sunstroke (increased by 0.11%)

Decreased incidences in deaths due to the following causes were noted in the year 2016 when compared with those in the year 2015:

1. Head injury (decreased by 3.9%)
2. Poly trauma (decreased by 0.53%)
3. Crush injury (decreased by 0.26%)
4. Poisoning (decreased by 1.68%)
5. Drowning (decreased by 1.96%)
6. Snake bite (decreased by 0.06%)
7. Electric shock (decreased by 0.18%)

Socioeconomic status of the individual has shown to be having major influence on the cause of death. In every year, deaths due to head injury, poisoning and burns are the major contributors of the statistical Medico-Legal deaths. It has been clearly depicted by the present study that deaths due to Head injury and poisoning have marginally decreased owing to the increased awareness of the traffic regulation and increased socio economic standards of the poison susceptible population, mostly farmers. Increased deaths due to burns indicate the decreased socio-economic and moral standards leading to increased instances of suicidal burns mostly in married women.

### Suggestions

The present study statistically classified the deaths as per their cause of deaths and correlated with the statistics of the following year, and studying the changing trends and patterns of the cause of deaths. It is highly advisable and essential to also study the changing trends of deaths in relation to the socioeconomic classes as per Kuppaswamy classification of the socioeconomic standards<sup>6</sup> as

1. Upper,
2. Upper middle,
3. Middle/lower middle
4. Lower/upper lower
5. Lower.

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