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# Spatio-Temporal Analysis of Dowry Death in Chandigarh

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**Abstract:** *The present research work “Spatio-temporal Analysis of Dowry Death in Chandigarh ” is carried out to study the spatio-temporal pattern of dowry death, It varies from class to class, culture to culture and society to society. Women of all age groups are due victims of crime and violence against them. The sexual violence and crime against women are not new in Indian society.*

**Keywords:** *Spatio-temporal, Analysis of Dowry Death, Geographical, Chandigarh, Crime against Women.*

## I. INTRODUCTION

This is very shocking news that the most of the crime incidents against women are ignored and unreported. Only a few women are in the position to report the case of crime against them. The reasons of un-reporting are many including low conviction rate, social stigma, lack of awareness about women rights, timid and weak attitude, fear of retaliation from offender, what society will say etc. Crime actually depends on the socio-cultural conditions of a particular society. For eg. Dowry death in India is a phenomenon of particular society, which does not exist in western world

## II. STUDY AREA

Chandigarh is a city and a union territory of India that serves as the capital of the Indian states of Punjab and Haryana. As a union territory, the city is governed directly by the Union Government and is not part of either state.

The city tops the list of Indian States and Union Territories by per capita income followed by Haryana and Delhi respectively in the country. The metropolitan of Chandigarh-Mohali-Panchkula collectively forms a Tri-city, with a combined population of over 2 million. Chandigarh is the first smoke-free city in India.

As of 2011 India census, Chandigarh had a population of 1,055,450, making for a density of about 9,252 (7,900 in 2001) persons per square kilometer. Males constitute 55% of the population and females 45%. The sex ratio is 818 females for every 1,000 males, which is the third lowest in the country, up from 773 in 2001. The child sex ratio is 880 females per thousand males, up from 819 in 2001.

Chandigarh has an average literacy rate of 86.77%, higher than the national average; with male literacy of 90.81% and female literacy of 81.88%. 10.8% of the population is under 6 years of age.

There has been a substantial decline in the population growth rate in Chandigarh, with just 17.10% growth 2001-2011. Since, 1951-1961 the rate has decreased from 394.13% to 17.10%. This is probably because of rapid urbanization and development in neighboring cities.

The urban population constitutes of as high as 97.25% of the total and the rural population makes up 2.75% as there are only few villages within Chandigarh on its Western and South-Eastern border and majority of people live in the heart of Chandigarh. Hinduism and Sikhism are the prominent religions of Chandigarh followed by 80.77% and 13.10% people respectively. Minorities are Muslims 4.87%, Christians 0.82%, Buddhists 0.15% and Jains 0.18%, while others are 0.11%.

## III. THE OBJECTIVES OF THE STUDY ARE

- A. To examine the spatial patterns of Dowry death in Chandigarh.
- B. To analyse the temporal trends of Dowry death in Chandigarh.
- C. To identify the Hot- Spot and Prone Areas of Dowry death in Chandigarh.

## IV. SOURCE OF DATA

The required data regarding location and types of Dowry death for 2005, 2010 and 2015 has collected from the Chandigarh Police Station and Police Headquarter.

## V. RESEARCH METHODOLOGY

The Dowry death is the fundamental issue, which discussed in present work. Based on the objectives of the study, following methodology has adopted. The recorded crimes calculated with the help of following formula.

$$\text{Crime Rate } e = CR_i = \frac{CX_i}{TFP_i} \times 100000$$

Where:  $CR_i$  = Rate of Crime 'X' in Wards I.

$CX_i$  = Crime 'X' in Wards I.

$TFP_i$  = Total Female Population in Wards I.

An attempts has made to get spatial patterns of Dowry death, the processed information represents through statistical diagrams and has been drawn map using suitable cartographic techniques. The Arc GIS Version 9.3 used generating Map OF Dowry death in Chandigarh during the years 2005, 2010 and 2015. Appropriate tables, graphs and charts used to present the trends of Dowry death.

## VI. RESULTS AND DISCUSSIONS

### A. The Section 304 b of the Indian Penal Code gives the Legal Definition of Dowry Death

IPC 304 B, Explain the Dowry death, according to this where the death of a woman is caused by any burns or bodily injury. or occurs otherwise than under normal circumstances within seven years of her marriage and it is shown that soon before her death, she was subjected to cruelty or harassment by her husband or any relative of her husband for, or in connection with, any demand for dowry, such death shall be called "dowry death", and such husband or relative shall be deemed to have caused her death.

Explanation.-For the purposes of this sub-section, "dowry" shall have the same meaning as in section 2 of the Dowry Prohibition Act, 1961. (2) Whoever commits dowry death shall punish with imprisonment for a term which shall not be less than seven years but which may extend to imprisonment for life.

### B. Dowry Death In India

Data of N.C.R.B Report 2015, shows that in year 2015 maximum numbers of Dowry Death cases were registered in the state of Uttar Pradesh (2335 cases) followed by Bihar (1154), Madhya Pradesh (664), West Bengal (498) and Rajasthan (463). These five states constitute 66.98 percent of the total Dowry Death cases reported in the country as a whole. Whereas in terms of rate, the national Dowry Death rate is 1.3 Among the states, Uttar Pradesh and Bihar both have (2.3) ranked first followed by Haryana (1.9), Madhya Pradesh (1.8), Orissa (1.7) and Jharkhand (1.6). In case of union territories, the Dowry Death rate was 1.3 in Delhi followed by Chandigarh (0.7).

### C. Spatial Pattern of Dowry Death in Chandigarh in 2005

A total 22 wards and 22 villages are analysed here. Incidence of Dowry Death at the wards and villages level shows that in the year 2005, maximum only three cases registered in year 2005, in the Ward No. 7, 15, 19. These three wards constitute 100 percent of the total Dowry Death cases reported in Chandigarh as a whole. Whereas in terms of rate, the rate of Dowry Death during 2005, the ward no. 7, 15 and 19 have 3.2, 6.7 and 4.4 respectively. The average crime rate of Dowry Death in Chandigarh was 0.8 in 2005.

The geographical pattern of Dowry Death in the year 2005 shows that the South Western and South Eastern parts shows higher crime rate and the rest wards shows lower crime rate of Dowry Death.

### D. Spatial Pattern of Dowry Death in Chandigarh in 2010

A total 22 wards and 22 villages are analysed here. Incidence of Dowry Death at the wards and villages level shows that in the year 2010 only five cases registered in year 2010, in the Burail and ward no. 7, 13, 19. Whereas in terms of rate, the rate of Dowry Death during 2010, village Burail have 335.6 followed by Ward No. 13 (9.3), Ward No. 19 (8.7), ward no. 7 (3.2). The average crime rate of Dowry Death in Chandigarh was 1.3 in 2010. The geographical pattern of Dowry Death in the year 2010 shows that the South Western and South Eastern parts shows higher crime rate and the rest wards shows lower crime rate of Dowry Death.

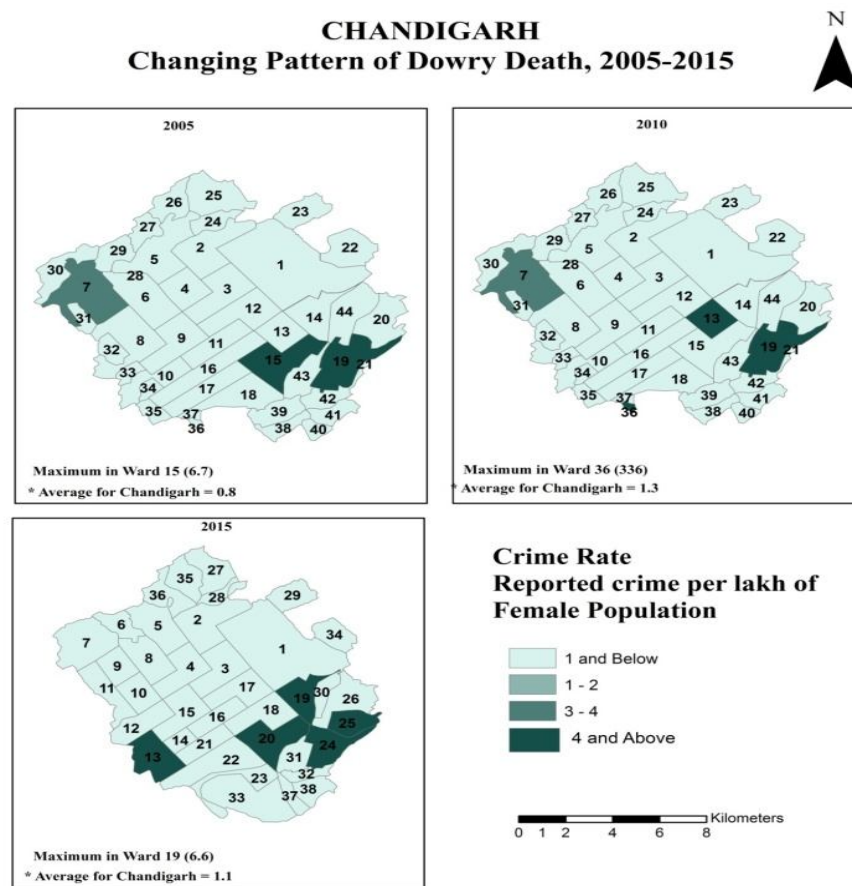
**E. Spatial Pattern of Dowry Death in Chandigarh in 2015**

A total 28 wards, 5 towns and 5 villages are analysed here. Incidence of dowry death at the wards and villages level shows that in the year 2015, only 5 cases were registered in year 2015, in the Ward No. 13, 19,20,24,25 have one case in each wards. Whereas in terms of rate, the rate of dowry death during 2015, ward no. 13 (6.6) followed ward no. 19 (5.7), ward no. 20 (4.8), ward no. 24 (4.2) and ward no. 25 (3.9). The average crime rate of Dowry Death in Chandigarh in 2015 was 1.1. The Ward level data on Dowry Death shows that Crime Rate of Dowry Death During 2015 shows that the The geographical pattern of Dowry Death in the year 2015 shows that the Southern and Eastern parts shows higher crime rate and the rest wards shows lower crime rate of Dowry Death.

**F. Changing Pattern and Causes of Dowry Death Rate in Chandigarh from 2005-2015**

The spatial patterns of Dowry Death rate experienced with marginal changes from 2005 to 2015. From 2005 to 2015, the rate of dowry deaths is higher in Eastern parts of Chandigarh. Higher Dowry Death rate, found in following areas including Burail, ward no. 7, 13, 15 and 19.

The major factor responsible for this are following large size of household, lower sex ratio, lower percentage of working women population, low level of female literacy, higher percentage of house ownership, patriarchal mind set of society and low level of basic amenities availability in households are responsible for the higher Dowry Death rate in these areas.



Source: Police Headquartar, Chandigarh

**VII. TEMPORAL TRENDS OF DOWRY DEATH IN INDIA**

The reported cases of dowry death in India show variations across the time. The maximum numbers of dowry death incident are found in year 2011 (8618 cases) followed by year 2014 (8455), 2010 (8391) and 2009 (8383) however lowest in year 1994 (4935), 1992 (4962), 1995 (5092) and 1991 (5157).



Whereas, in case of dowry death rate, the highest i.e. 1.7 in 1998, 2000, 2009 & 2010 followed by 1999, 2007, 2008 (1.6). However, the lowest Dowry Death rate i.e. 1.2 in 1992 & 1994 shows followed by 1991, 1995, 2003, 2015 (1.3).

**A. Temporal Trends of Dowry Death in Haryana**

The reported cases of dowry death in Haryana show variations across the time. The maximum numbers of dowry death incident are found in year 1998 (309 cases) followed by year 2008 (302), and 2014 (293) however lowest in year 1991 (144), 1993 (166) and 1994 (191).

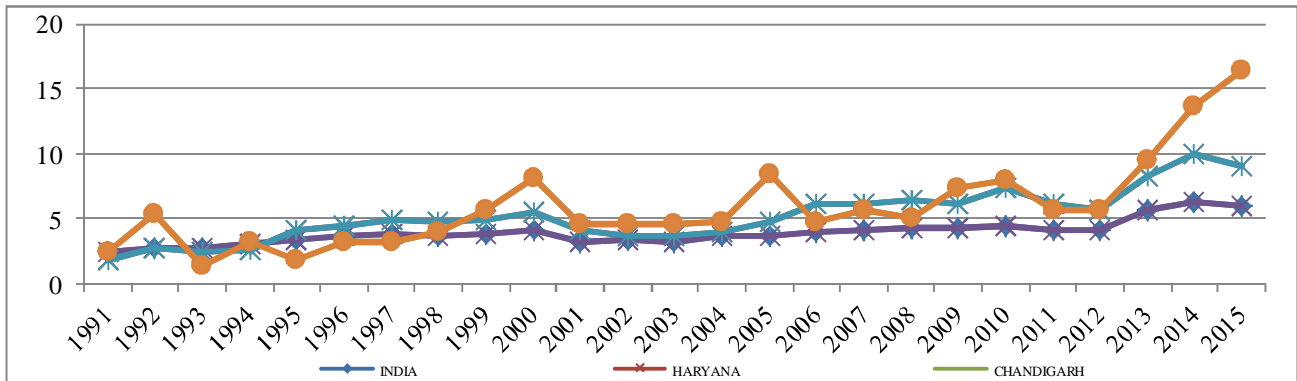
Whereas, in case of dowry death rate, the year 1999 shows the highest dowry death rate i.e. 3.8 followed by 1997 (3.5) and 2000 (3.4). However, the year 1991 shows the lowest dowry death rate 1.9 followed by 2005 (2), 193, 2005, 2011, 2012 and 2013 were (2.2).

**B. Temporal Trends of Dowry Death in Chandigarh**

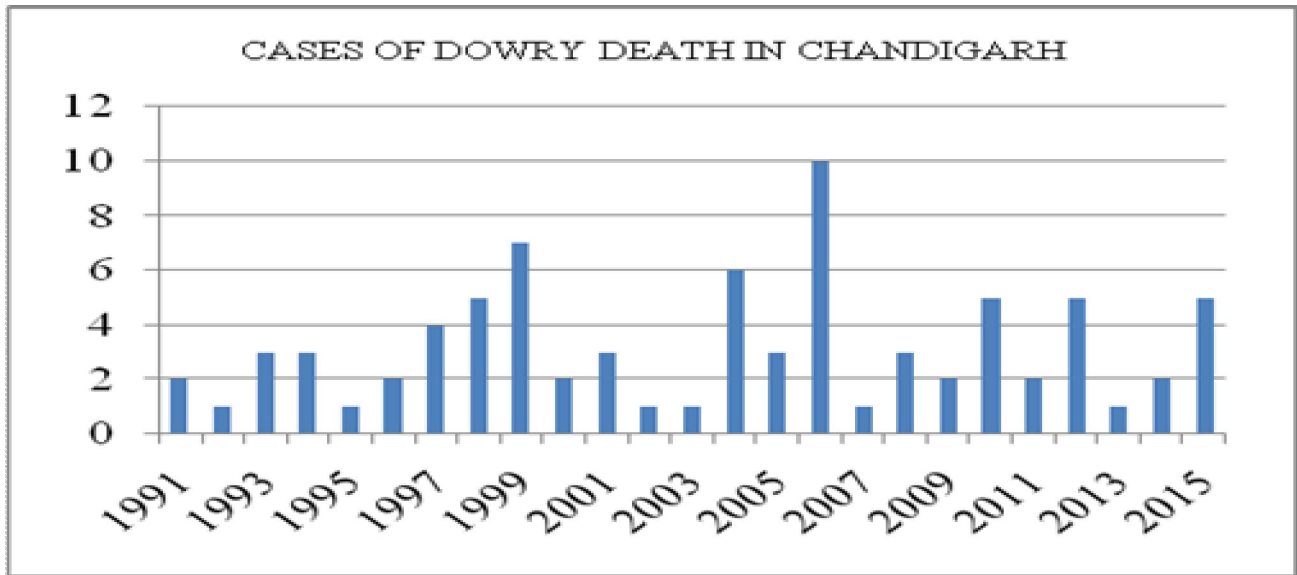
The trends of dowry death in Chandigarh show variations across the time. The maximum numbers of dowry death incident are found in year 2006 (10 cases) followed by year 1999 (7) and 2004 (6), however, lowest in year 1992, 1995, 2002 and 2003 shows only 1 case.

The trends of the dowry death show irregularity. With respect to time period, the highest rate of dowry death i.e. 2.5 in 2006 & 1999 followed by 1998 (1.8), 2004, 1997 and so on. However the lower i.e. 0.2 in 2013 followed by 2002, 2003 & 2007 have (0.3). Probable reason of lower dowry death rate being increased literacy, awareness regarding women rights and implementation of dowry prohibition act.

**VIII. TEMPORAL TRENDS OF DOWRY DEATH RATE**



Source: N.C.R.B. Reports from 1991-2015.



Source: N.C.R.B. Reports from 1991-2015

DOWRY DEATH INCIDENT AND RATE						
Years	INDIA		HARYANA		CHANDIGARH	
	Incident	Rate	Incident	Rate	Incident	Rate
1991	5157	1.3	144	1.9	2	0.7
1992	4962	1.2	209	2.7	1	0.4
1993	5817	1.4	166	2.2	3	1.1
1994	4935	1.2	191	2.5	3	1.1
1995	5092	1.3	218	2.9	1	0.4
1996	5513	1.4	223	2.9	2	0.7
1997	6006	1.5	267	3.5	4	1.4
1998	6975	1.7	309	4	5	1.8
1999	6699	1.6	288	3.8	7	2.5
2000	6995	1.7	263	3.4	2	0.7
2001	6851	1.4	285	2.9	3	0.8
2002	6822	1.4	256	2.6	1	0.3
2003	6208	1.3	222	2.3	1	0.3
2004	7026	1.4	251	2.6	6	1.5
2005	6787	1.4	212	2.2	3	0.8
2006	7618	1.5	255	2.6	10	2.5
2007	8093	1.6	269	2.6	1	0.3
2008	8172	1.6	302	3.1	3	0.8
2009	8383	1.7	281	2.9	2	0.5
2010	8391	1.7	284	2.9	5	1.3
2011	8618	1.5	255	2.2	2	0.4
2012	8233	1.4	258	2.2	5	1.1
2013	8083	1.4	263	2.2	1	0.2
2014	8455	1.4	293	2.5	2	0.4
2015	7634	1.3	243	2	5	1.1

Source: N.C.R.B. Reports from 1991-2015

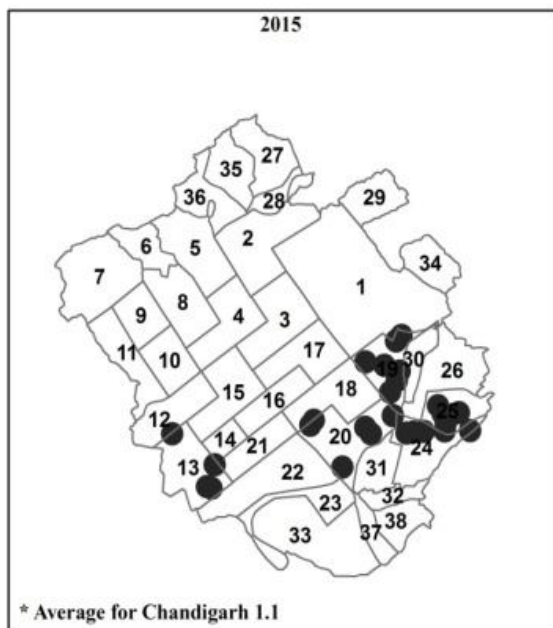
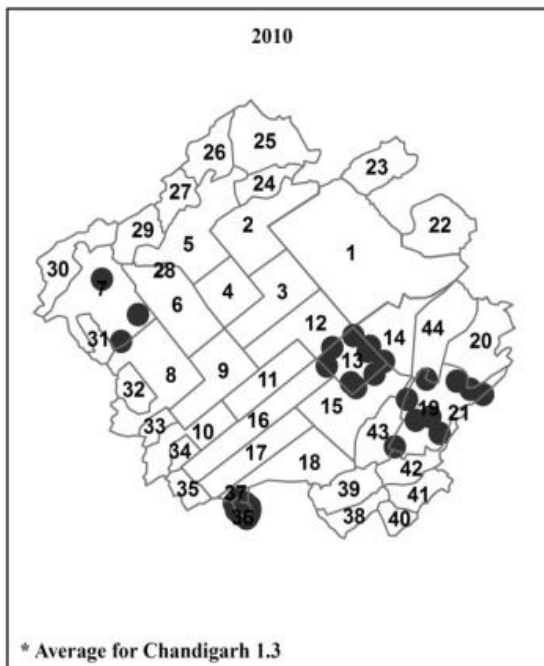
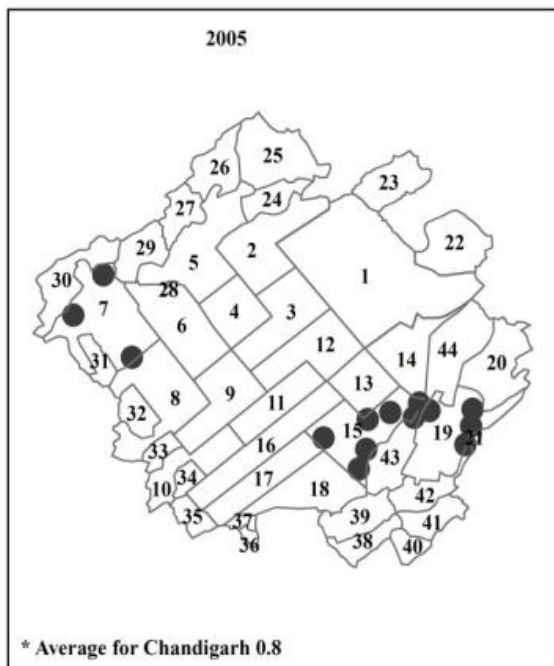
### IX. DOWRY DEATH HOT SPOT

The reported incidences of dowry death during 2005 were 0.8 cases per lakh of female population. Its rate increased to 1.3 in 2010. However, rate of such cases were 1.1 in 2015. Hot spot of dowry death shows regular pattern across the time. These hot spot found in the eastern part of the Chandigarh, during all the year 2005, 2010 and 2015. The patriarchal phenomenon of the joint family, the higher number of owns house, big size of households and all amenities availability within the house in these areas are major cause behind this scenario.

Year	Hot Spot Area Name
2005	Ward no. 7, 15 and 19 Total=3
2010	Maloya, Burail, Bair Majra, Ward no. 7, 13 and 19 Total=6
2015	Ward no. 13, 19, 20, 24, 25, 26, Kishangarh and Bhagwanpura Total=8

Source: Based on data/information collected through fieldwork conducted during November and December, 2016

## CHANDIGARH Hot-Spot of Dowry Death, 2005-2015



**Crime Rate**  
Reported Crime per lakh of  
Female Population

1 Dot = 1 Rate



Source: Police Headquartar, Chandigarh



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