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## Determinants of Crimes Against Women in Pre and Post Liberalised India

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### ABSTRACT

Violence against women tends to violate their integrity, safety and dignity. Crime against women has been the key features of the Indian economy where women share a population base of 49% (Census of India, 2011). Crimes against women degrade and hamper their position in the society as well as their autonomy. Thus, the paper makes an attempt to study the determinants of crime against women during the period of 1991-2015. The data has been retrieved from National Crime Records Bureau, National Sample Survey Organisation and Central Statistical Organisation. The main findings of the study reveals literacy rate as the most significant indicator of the major forms of crimes against women. Urbanisation, however, does not provide any significant linkage. The paper also gives a glimpse of inert-state variations with respect to various forms of crimes.

**Keywords:** Crime, Women, Development, Growth, Liberalisation Gender based violence is the most universal and socially tolerated of human rights violations. It reflects inequalities between male and female and compromises the dignity, health and autonomy of the victims. (United Nations Population Fund, 2005)

### 1. INTRODUCTION

Crime debases the quality of life in many ways. It impairs the freedom of victims with respect to various employment and educational opportunities. Crime further degrades the autonomy of the victims. (World Bank, 2006) from a macro perspective eye, crime suppresses the ability of the nation to promote development. Increasing incidences of crime can crowd out foreign as well as domestic investments further affecting the labour market. Where women in India have a fair share of 49% in the population base, they remain significant drivers of economic development and growth. But unfortunately, the position such a huge amount of demographic base is of vulnerable nature in India. Agencies of World Health Organisation and

United Nations document that crime against women act as a fundamental barrier in achieving the goals of development and equality of a nation. Crimes against women violate and diminish the enjoyment of their human rights. (UNIFEM, 2003) Secretary General of United Nation describes violence against women as the most shameful representation of human rights and the most dynamic one. Over the last ten years crimes or violence against women especially in developing countries has emerged as a widespread concern among policymakers and researchers interested in women rights and their empowerment. Violation of women rights, their safety, integrity and dignity have been the most prominent features of the Indian economy for the past two decades.

Controlling crime rates against women is, therefore, fundamental in developing nation like India where huge amount of investment is made in (Dutta & Hussain, 2009) establishing and maintaining the police force and judicial system. Such a mechanism will be effective if they are based on understanding of crimes and factors determining crime rates at all India level and at inter-state level. Accordingly, dealing with different types of crimes against women in a society is a matter of public action. This further calls for an investigation that identifies determinants of crimes against women and explores the relationship between the major form of crimes against women and socioeconomic variables. A substantial body of literature has emerged in developed and developing countries to investigate into specific type of crime against women. The reason why crime against women as a whole is an unsearched issue in studies is the paucity of relevant data. The Indian government, however, publishes a good deal of information on crimes in India. Therefore, this study is a preliminary attempt to analyze the data on major forms of crimes against women.

The main concern and the objective of the paper is to explore the links between various types of IPC crimes against women viz., rape, kidnapping and abduction, dowry deaths, molestation, sexual harassment, cruelty by husband or his relatives and total crimes against women as a whole and socio-economic variables such as GDP, urbanisation, literacy rate and sex ratio, before and after the liberalisation phase.

## **2. DATA SOURCES AND METHODOLOGY**

### **2.1. Crime In India**

Crime in India is an annual publication of National Crime Records Bureau. Crime in India is divided under two heads Cognizable and Non-cognizable crimes by Criminal Procedure Code. The police are directly in charge of cognizable crimes, they may investigate without the permission of magistrate and effect arrest without warrant. Cognizable crimes are further divided into Indian Penal Code (IPC) and Special and Local Laws (SLL). Non-cognizable crimes, on the other hand, are left to be pursued by the affected parties in courts; the police cannot investigate without the permission of magistrate.

Following the past studies, the paper only considers crimes under Indian Penal Code (IPC). The probable reason being different mechanisation involved in the enforcement of IPC and SLL crimes. The paper explores various types of 'Crimes Against Women' under the IPC section, namely Rape, Kidnapping and Abduction, Dowry Deaths, Molestation, Sexual harassment, Cruelty by husband or his relatives and Total crimes against women. The incidences of various crimes against women are given in absolute numbers. The paper however, investigates the crime rates per female population as an absolute measurement is deceptive.

The period for which investigation has been done comprises of two phases, Phase I that is pre liberalisation Phase (1991-200) and Phase II that is post liberalisation phase (2001-2015). Data for the study has been retrieved from National Crime Records Bureau, Census of India, Ministry of Statistics and Programme Implementation.

An analysis of crimes against women per female population over the study period reveals an overall increasing trend with a sudden fall in the year of 2015. There has been an immoderate increase in the crime rate<sup>1</sup> by 37.6% during 1991-2015. This represents an annual increase of 1.5%.

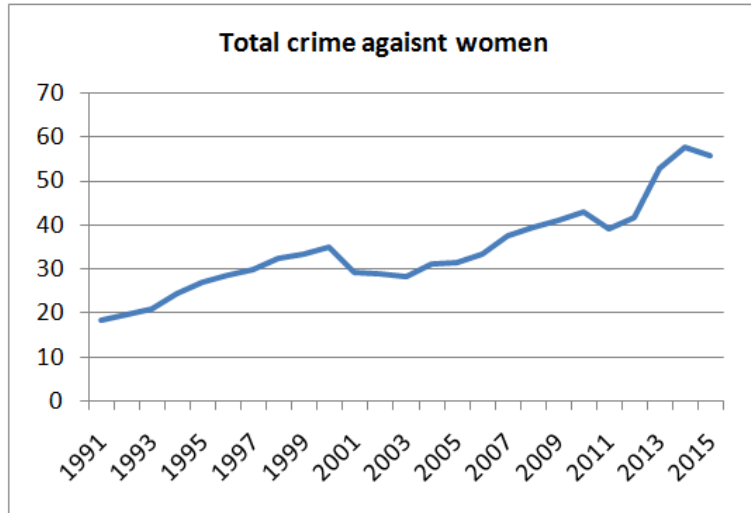


Figure 8.1

Over the years, the nature of crime has not changed drastically. A comparison of the major share of crime against women in 1991, 2001 and 2011 shows marginal differences in dowry deaths and sexual harassment. However, major differences are seen in rape, kidnapping and abduction, cruelty by husband or his relatives and total crimes against women.

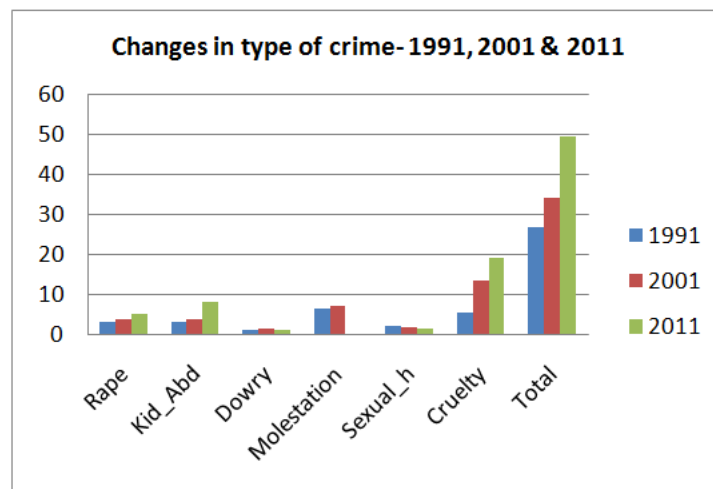


Figure 8.2

A trend analysis of all the crimes against women at specific crime level shows that a major increasing trend is seen in the case of Cruelty by husband or his relatives. There has been an increase of 12.33% during the study period. Reasons behind this increase can be household poverty, ownership of assets or land by wife, greater autonomy exercised by females (Martin et al, 1999; Panda & Agarwal, 2005). Kidnapping and abduction shows an overall increase of 7.07% during the study period. The rate shoots up by 2.3% from 2012 to 2013 and increases further. Crime rate of rape has increased up to 3.5% with a sharp increase in 2014 by 0.5%. With reference to the crime rates of molestation, sexual harassment and dowry deaths have increased by 3.5%, 1.5% and 0.5% respectively. (Heise et al, 1999) one woman in every three women around the world has been beaten, forced to sex or abused. There has been an increase of 37.5% in total crime rate against women. This brings a gloomy and frightening picture of Indian economy. the increase in crimes against women is mainly due to our attitudes towards violence against women followed by low levels of literacy, low sex ratio, prevalence of poverty etc.

## 2.2. Crime Function

The hypothesis of this paper is that crime rates depends upon the socio-economic structure. The structure can be decomposed into the following variables:

1. Economic growth: (Kumar, 2013) examines the causality between crime rates and economic growth using state level data; (Fleisher, 1966) and (Ehrlich, 1973) economic growth as a proxy for economic prosperity; (Benett, 1991) rate of growth is important as it leads to generation of economic opportunities. Figures of gross domestic product (at constant prices 2004-2005) publishes by Mospi has been used in this paper as a measure of economic growth.
2. Education: higher levels of educational attainment raises the abilities and skills and opens up gateway to enter into labour market, (Freeman, 1991; Groger 1995) which increases the opportunity cost of criminal activity. (Kumar, 2000) education moderates criminal activity. (Koeing et al, 2006) low levels of education determinants of domestic violence in India. This paper considers the education attainment up to middle level available from NSSO.
3. Urbanisation: the structural transformation of an economy from rural based to urban based, caused by multiple forces may lead to increase in crime rates. (Fisher, 1987) migration from rural to urban areas may stimulate an increase in criminal activities as a result of modernisation. (Dreze & Khera, 2000) urbanisation is significant activity leading to increase in crime rates for murder. (United Nations, 2005) social tension caused by urbanisation in an economy characterised by diversity leads to eruption of criminal activity and also leads to disruption in socio-religious norms causing gender based crimes.
4. Sex ratio: (South et al, 2014) higher male to female sex ratio leads to increased harassment of women. Criminal activities take place due to inequalities, these inequalities in turn affect sex ratio. Therefore, the paper uses female to male sex ratio as a proxy for inequality.

**Regression Variables:** Small amount of material is available to develop a plausible “crime” model in India, in order to test the determinants of crime against women, (Glaeser, 1999) only a few attempts has been made to construct a model for formal analysis in developing countries; therefore, the paper takes into account econometric approach of regression analysis. The regression function is interpreted as crime against women [measured by proxy variables (rape, kidnapping and abduction, molestation, sexual harassment, cruelty by husband or his relatives)] as a function of various socio economic variables.

The regression variables and their means for two time periods, that is; pre and post liberalisation are listed in Table 1. The unit of analysis is the all India level and the reference year being 1991, 2001 and 2011.

The macro level analysis is a useful analysis in this context, as crimes against women is measured by various variables. It is indeed, a natural phenomenon to focus on crime against women as a characteristic of the Indian society.

The presupposed form of crime rate against women as a function takes the following form:

$$CAW = \beta_0 + \beta_1 GDP + \beta_2 \text{ Literacy Rate} + \beta_3 \text{ Urbanisation} + \beta_4 \text{ Sex ratio} + \mu$$

Where, CAW is crime against women.

**Table 8.1**  
**Regression variables and their means for two time periods (1991-2001 and 2001-2015)**

<i>Variable Name</i>	<i>Definition</i>	<i>Variable Mean</i>
Rape	Rape against women per female population of the census year (unweighted average of annual figures for 1991-2000, 2001-2010, and 2011-2015)	1991- 3.33 2001- 2.26
Kidnapping & Abduction	Kidnapping & Abduction against women per female population of the census year (unweighted average of annual figures for 1991-2000, 2001-2010, and 2011-2015)	1991- 3.47 2001- 3.02
Molestation	Molestation against women per female population of the census year (unweighted average of annual figures for 1991-2000, 2001-2010, and 2011-2015)	1991- 6.61 2001- 7.43
Sexual Harassment	Sexual Harassment against women per female population of the census year (unweighted average of annual figures for 1991-2000, 2001-2010, and 2011-2015)	1991- 2.15 2001- 0.905
Cruelty by husband or his relatives	Cruelty by husband or his relatives against women per female population of the census year (unweighted average of annual figures for 1991-2000, 2001-2010, and 2011-2015)	1991- 5.69 2001- 8.15
Dowry Deaths	Dowry deaths against women per female population of the census year (unweighted average of annual figures for 1991-2000, 2001-2010, and 2011-2015)	1991- 1.42 2001- 0.72
Total crime against women	Total crime against women per female population of the census year (unweighted average of annual figures for 1991-2000, 2001-2010, and 2011-2015)	1991- 26.84 2001- 20.9
GDP	Rate of GDP at constant prices (2004-2005) (unweighted average of annual figures for 1991-2000, 2001-2010 and 2011-2015)	1991- 1.43 2001- 3.02
Literacy rate	Literacy rate of the population for 1991, 2001 and 2011	1991- 437 2001- 696
Urbanisation	Proportion of population living in urban areas, 1991, 2001 and 2011 %	1991- 25.71 2001- 14.92
Sex ratio	Female per 1000 males, 1991, 2001 and 2011	1991-927 2001-933

### 2.3. Crime Model

The time series analysis assumes stationarity in the series, if the time series is found to be non-stationary, the relationship between independent and dependent variables might lead us to misleading inferences. A series is said to be stationary if the mean and auto covariance of the series so considered for the study has a unit root. The popular Augmented Dickey Fuller (ADF) test allows us to do so. The tests use the null hypothesis that the series does contain a non-stationary variable as against stationary variable in the alternative hypothesis. The calculated tests statistics must be higher than the critical values in order to reject the null. MacKinnon's (1996) critical are used to determine the significance of the test statistics associated with the coefficient to be estimated.

The equation of the unit root test is expressed as:

$$\Delta R_t = \sum_i^k \beta_i + \varepsilon_t$$

Therefore, before performing multiple regression analysis, the time series variables were checked (results shown in appendix Table 2) in for stationary tests, the results so obtained showed that the dependent variables such as Molestation, Sexual Harassment, Rape and Cruelty by husband or his relatives and the explanatory variables Literacy rate and Sex ratio were stationary at first difference for 1%, 5% and 10% level of significance. The dependent variables, Total Crime against Women and Dowry Deaths and the explanatory variables GDP and urbanisation were stationary at 5% and 10% significance interval levels and Kidnapping and Abduction was stationary at 10% significance levels.

To gauge the various socio-economic determinants that affect crime against women, a multiple regression analysis was conducted to examine the association between dependent and explanatory variables.

### 3. EMPIRICAL FINDINGS

The multiple regression analysis equation to explain the variation in Rape<sup>1</sup> caused by socio-economic variable is defined as follows:

$$\begin{aligned} \text{Rape} = & \beta_0 + \beta_1 \text{GDP} + \beta_2 \text{Literacy Rate} + \beta_3 \text{Urbanisation} \\ & + \beta_4 \text{Sex ratio} + \mu \end{aligned}$$

Rape as defined by Section 376, IPC follows that a man is said to commit a rape who has sexual intercourse with a woman as against her will, without her consent, or otherwise obtained by putting her or any person she is interested in fear of death and with or without her consent when she is under 16 years of age.

The amount of variance shown by the socio economic indicators in regression equation is found to be 81%, meaning 81% of the changes in rape can be explained by the socio economic indicators the study considers. Literacy rate is significant at 5% level of significance. Sex ratio shows a negative coefficient, although being statistically insignificant. This shows that as number of females per 1000 males increases the incidences of Rape will fall. Tamil Nadu clearly represents the phenomenon as it has a fair sex ratio of 996 females per 1000 males and has the lowest rate of rape against women of 1.2.



The multiple regression analysis equation to explain the variation in Kidnapping and Abduction<sup>2</sup> caused by socio-economic variable is defined as follows:

$$\begin{aligned} \text{Kidnapping} = & \beta_0 + \beta_1 \text{ GDP} + \beta_2 \text{ Literacy Rate} + \beta_3 \text{ Urbanisation} \\ & + \beta_4 \text{ Sex ratio} + \mu \end{aligned}$$

Kidnapping and Abduction as defined by IPC, Section 366 explains that whoever abducts or kidnaps a woman with an intention of forced marriage or force intercourse will be entitled for imprisonment.

The amount of variation in regression equation stands out at 79%, explaining that the explanatory variables exert around 79% of influence on the dependent variables. With only literacy rate having statistically significant relationship at 5% level of confidence. GDP and sex ratio, although not significant have a negative coefficient value, Kerala having sex ratio of 1084 females per 1000 males at par has the lowest rate of 1.1 of kidnapping and abduction. The negative coefficient of GDP explains the fact that as a country prospers the incidences of crime reduces.

The multiple regression analysis equation to explain the variation in Dowry Deaths<sup>3</sup> caused by socio-economic variable is defined as follows:

$$\begin{aligned} \text{Dowry Deaths} = & \beta_0 + \beta_1 \text{ GDP} + \beta_2 \text{ Literacy Rate} + \beta_3 \text{ Urbanisation} \\ & + \beta_4 \text{ Sex ratio} + \mu \end{aligned}$$

Dowry death by IPC, Section 304B refers to death of a woman caused by any burns or bodily injury occurs within seven years of marriage and it is shown soon before her death she was subjected to any demand for dowry. (Sanghavi et.al, 2001) found out burns as an important public health concern as estimated around 106000 out of 163000 fire related deaths occurred in women. The amount of variation shown by socio-economic indicators in the regression equation tends to be very low at 33% and only GDP is statistically significant at 5% level. Various steps are taken by the government to curb dowry deaths in India, one such step is formulation of Dowry Prohibition Act 1961, as against the incidences of dowry deaths has reduced at all India level per female population. Andhra Pradesh, Meghalaya, Tamil Nadu have least amount of incidences of dowry deaths.

The multiple regression analysis equation to explain the variation in Cruelty by husband or his relatives<sup>4</sup> caused by socio-economic variable is defined as follows:

$$\begin{aligned} \text{Cruelty} = & \beta_0 + \beta_1 \text{ GDP} + \beta_2 \text{ Literacy Rate} + \beta_3 \text{ Urbanisation} \\ & + \beta_4 \text{ Sex ratio} + \mu \end{aligned}$$

GDP is statistically significant at 5% level of significance. The socio-economic indicators affect the dependent variables by 69%. Negative coefficient is seen in cases of Sex Ratio and Urbanisation variables. This yields rate of cruelty by husband or his relatives reduces as people migrate to urban areas, the reason might be the law enforcement in urban areas, where various organisations such as self help groups work in favour of women or the greater degree of self actualisation and esteem need of integrity and dignity practiced by women in urban areas.

The multiple regression analysis equation to explain the variation in Molestation<sup>5</sup> caused by socio-economic variable is defined as follows:

$$\text{Molestation} = \beta_0 + \beta_1 \text{GDP} + \beta_2 \text{Literacy Rate} + \beta_3 \text{Urbanisation} + \beta_4 \text{Sex ratio} + \mu$$

Molestation as defined by Section 354, IPC as indecent assault of women with an intent outrage her modesty. The variable shows an association of 59% with the explanatory variables. GDP and literacy rate are statistically significant at 5% confidence interval. Literacy rate and sex ratio have a negative coefficient although not significant.

The multiple regression analysis equation to explain the variation in Sexual Harassment<sup>6</sup> caused by socio-economic variable is defined as follows:

$$\text{Sexual Harass} = \beta_0 + \beta_1 \text{GDP} + \beta_2 \text{Literacy Rate} + \beta_3 \text{Urbanisation} + \beta_4 \text{Sex ratio} + \mu$$

Section 354A of IPC describes sexual harassment as a man indulging in physical contact and advances explicit sexual overture or demands for sexual favours and making sexually coloured remarks shall be guilty of the offence of sexual harassment.

The amount of variation shown by the socio-economic indicators is very low at 9%, with no indicator being statistically significant. The coefficients of GDP, Literacy rate and Sex ratio are negative implying a negative association between incidences of sexual harassment and socio economic indicators. This can be explained from the case of Manipur which has the minimum crime rate of 1.1 per female population and has significant sex ratio of 985 females per 1000 males and a fair growth rate of GDP at 6.21% and having a literacy rate of 76%. These variables are fair enough to explain the negative association between the crime rates of sexual harassment with socio economic indicators.

The multiple regression analysis equation to explain the variation in Total Crime against Women<sup>7</sup> caused by socio-economic variable is defined as follows:

$$\text{TCAW} = \beta_0 + \beta_1 \text{GDP} + \beta_2 \text{Literacy Rate} + \beta_3 \text{Urbanisation} + \beta_4 \text{Sex ratio} + \mu$$

With 80% of variation shown by socioeconomic indicators in the regression equation, GDP and literacy rate are statistically significant at 5% level.

Only Sex ratio has a negative coefficient, explaining the case of Pondicherry which has the minimal crime rate of 10.9 and a fair sex ratio of 1038 females per 1000 males. This explains the phenomenon correctly as sex ratio increases the total incidences of crime against women will decrease.

#### 4. DISCUSSION

The national crime records bureau data of crimes against women is not a survey which exhibits the structure and development of human society nor it is a study related with humankind, the survey is a mere representation of number of crimes reported and recorded by the Indian police related with development



(Government of India, 2000). Although the econometric analysis so conducted do give robust statistical results for the crime rate (crime against women per female population), this does not mean that we can extract information about the real occurrences of various types of crime against women. Therefore, on account of large amount of data being under reported and biased, a specific model cannot be devised out to study crime.

However, the multiple regressions (Table 3) reveal interesting results. In 2015 the total crime against women cases were recorded 327394 in India by NCRB. This marks an increase of 25000 cases during 1991-2015. Highest number of cases was recorded in cruelty by husband or his relatives (84824 cases) followed by kidnapping and abduction (46977) and rape (24677). The analysis reveals that amongst the socio-economic indicators significant association is yielded by only literacy rate in most of the cases. Analysis of the signs of coefficient of socio-economic variables reveals mixed results. Increase in economic growth measured by GDP has led to an increase in crime rates. The policy process of liberalisation gives strong evidences for this increase in crime rates. The reform process although has spurred up economic growth but has also led to an increase in inequalities and social tension. India ranks 141<sup>th</sup> out of 142 nations under gender critical nations. Gender inequality index ranks India 127<sup>th</sup> out of 142 countries and 114<sup>th</sup> on the gender gap in the world. The figures thus explain the critical condition of women in Indian society as compared to men. The capital intensive nature of the reform process has curbed the employment opportunities for general public. Sharp increase in consumer demands due to demonstration effect (Duesenberry, 1949) followed by restrictions on legal terms to suppress the demand has led to increase in criminal activities.

Similarly, rising educational attainment levels of masses with no proportionate increase in the employment opportunities has led to frustration causing increase in crime rates. State development or urbanisation does not appear to affect the levels of various crimes against women with cruelty by husband or his relatives being an exception. The migration of people from rural sector to urban sector on account of globalisation, has led to an increase in crime rates in order to meet up the growing self actualisation needs. Rising standard of living in urban areas has, further, increased the criminal activities. Sex ratio on the other hand is found to be negatively associated implying rising females per 1000 males will lead to decline in crime against women.

A feminist approach could suggest changes at macro as well as at micro levels. Nations or states where women are valued higher in hierarchy than men, experience lesser crime rate against women. Growing number of women per male population, decreases the rate of crime against women, where patriarchal norms are rigid. The Indian state with a higher ratio, such as Kerala and Pondicherry appear to have lesser crime rates of rape and dowry deaths as against states with lower sex ratio record higher incidences of crime rate against women. Similarly, states with higher literacy level such as Kerala followed by Lakshadweep and Mizoram have recorded lesser incidences of crime rate of kidnapping and abduction, dowry deaths and cruelty by husband or his relatives. Therefore, states with high development factors experiences lower rates of crime.

Thus, it appears that a combination of family based approach and feminist ideology as key concepts that can be used to explain violence against women from the results of recorded crimes in India, in the form of a gendered theory or gender crime model. The human development, gender development and economic factors represent a range of structural shifts, which may be combined to influence the crime rate

regression results. Further, on the basis of these approaches a robust crime model can be produced for tapping the association between the development and growth factors of different crimes from time series as well as panel data. Thereof, under reported and biased data along with no suitable model to gauge the influence of socio-economic indicators on crime against women remains a limitation as well as scope for further research.

## 5. CONCLUSION

This study attempted to identify some determinants of crime against women. The analysis reveals that crime against women is rising at a startling rate. Three types of pattern emerge from the analysis presented in the study. Firstly, the various types of crime against women bear no significant relationship with GDP, urbanisation and sex ratio. Secondly, education attainment level appears to hold a significant association with major forms of crime against women. Thirdly, sex ratio is inversely related with various types of crimes against women, meaning increase in number of women per 1000 males leads to decrease in crime rates.

Although, there is a need for further research to understand various cultural and socio-economic issues responsible for violence against women as warranted by the study. To combat various legal and cultural malpractices judicial stakeholders are needed. Moreover, the mindset and attitudes of people is of utmost important here, along with various strategies to eliminate discrimination against women or girls. Lastly, nothing works better than self prevention strategy; therefore, training must be given at the base level for combating violence against women.

## 6. APPENDIX

**Table 8.2**  
**Results of Augmented Dickey Fuller Test for stationarity**

<i>Variables</i>	<i>t-statistics</i>	<i>Critical values</i>
Rape	-4.206903	-3.752946* -2.998064
Kidnapping & Abduction	-2.967233	-2.938064 -2.638752
Dowry Deaths	-3.022753	-3.012363 -2.646119
Cruelty by husband or his relatives	-3.020686	-3.752946* -2.998064
Molestation	-4.823501	-3.752946* -2.998064
Sexual Harassment	-3.847056	-3.788030* -3.012363
Total crime against women	-3.712870	-2.998064 -2.638752

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<i>Variables</i>	<i>t-statistics</i>	<i>Critical values</i>
GDP	-2.987297	-2.991878 -2.635542
Literacy	-4.441690	-3.788030* -3.012363
Urbanisation	-3.035130	-2.998064 -2.638752
Sex Ratio	-4.074455	-3.808546* -3.020686

\*critical values at 1% significance

**Table 8.3**  
**Multiple Regression Results during the period 1991-2015**

<i>Dependent Variables</i>	<i>Independent Variables</i>			
	<i>GDP</i>	<i>Literacy</i>	<i>Sex Ratio</i>	<i>Urbanisation</i>
Rape	(0.0790) 0.812238*	(0.0286) 0.812238*	(0.6349) 0.812238*	(0.1744) 0.812238*
Kidnapping & Abduction	(0.9498) 0.799443*	(0.0254) 0.799443*	(0.3416) 0.799443*	(0.6043) 0.799443*
Dowry Deaths	(0.0067) 0.332667*	(0.5085) 0.332667*	(0.2217) 0.332667*	(0.8125) 0.332667*
Molestation	(0.0425) 0.598859*	(0.0353) 0.598859*	(0.6402) 0.598859*	(0.8013) 0.598859*
Sexual Harassment	(0.3486) 0.094325*	(0.9880) 0.094325*	(0.8763) 0.094325*	(0.5331) 0.094325*
Cruelty by husband or his relatives	(0.0184) 0.690611*	(0.0498) 0.690611*	(0.9193) 0.690611*	(0.7490) 0.690611*
Total crimes against women	(0.0804) 0.808565*	(0.0524) 0.808565*	(0.5346) 0.808565*	(0.4963) 0.808565*

Value in parenthesis are p values, \*R<sup>2</sup>Value

**References**

- Zellner, A. (1962). An efficient method of estimating seemingly unrelated regressions and tests for aggregation bias. *Journal of the American statistical association*, 57(298), 348-368
- Tjaden, P., & Thoennes, N. (1998). Prevalence, Incidence and Consequences of violence against women: Findings from National Violence against women survey. *ERIC*
- Heise, L., Ellsberg, M., & Gottemoeller, M., (1999). Ending violence against women. *Population reports*, 27(4), 1-1
- Dreze, J., & Reetika, K., (2000). Crime, gender and society in India: insights from homicide data. *Population and Development Review*, 26(2), 335-352

- Hackett, M., (2001). Domestic violence against women: statistical analysis of crimes across India. *Journal of Comparative Family Studies*
- Nayak, M., Byrne, C., Martin, M., & Abraham, A., (2003). Attitude towards violence against women: a cross nation study. *Sex Role, Vol. 49, Nos. 7/8*
- Krantz, G., & Garcia-Moreno, C., (2005). Violence against women. *Journal of epidemiology and community health, 59(10), 818-821.*
- Ahmed, S., & Jejeebhoy, S., (2006). Individual and Contextual determinants of domestic violence in North India. *American Journal of Public Health*
- Jeyaseelan, L., Kumar, S., Neelakantan, N., Peedicayil, A., Pillai, R., & Duvury, N. (2007). Physical spousal violence against women in India: some risk factors. *Journal of biosocial science, 39(05), 657-670*
- Sanghavi, P., Bhalla, K., & Das, V., (2009). Fire related deaths in India in 2001: a retrospective analysis of data. *The Lancet, 373(9671), 1282-1288*
- Flood, M., & Pease, B., (2009). Factors influencing attitudes to violence against women. *Trauma, Violence & Abuse, Vol.10, No.2, 125-142*
- Detotto, C., & Otranto, E. (2010). Does crime affect economic growth? *Kyklos (international review for social sciences), 63(3), 330-345.*
- Morgan, K., (2011). Inequality and Crime. *Review of Economics and Statistics, 82 (4): 530-539*
- Babu, G., & Babu, B., (2011). Dowry deaths: a neglected public health issue in India. *International Health, 3, 35-43*
- Mishra, A., & Patel, A., (2013). Crimes against the elderly in India: a content analysis on factors causing fear of crime. *International Journal of Criminal Justice Sciences, Vol.8*
- Kumar, S., (2013). Crime and economic growth: evidence from India. *Munich Personal RePEc Archive*
- Mishra, A. (2015) Combating gender based violence: Achieving gender equality in post 2015. *Journal of Social Sciences, Vol. 2, Issue 2*