

## **Creating Safe and Encouraging Public Spaces for Women**

**Manoj<sup>1</sup>**

**BA (H) Economics, III Yr, Hansraj College**

### **Abstract**

This paper attempts to analyze the status of safe public spaces for women or the female gender in India particularly and highlights issues and challenges for the same. Data for this study is taken from the period of 2002-2020 to examine the relation between the number of crimes against women, abduction, and their impact on women's participation in economic activities. The data shows that there is an increase in the number of victims of sexual harassment, assault, violence, and social evils against women. Socially women come under the category of vulnerable section. Access to public spaces such as corporate, public institutions, and educational one (schools, universities, etc.) are often restricted, and there are fewer women seen in the professional background due to a lack of equal opportunity for women as that for men which is categorically obvious and simmering discontent on a global level is purported. They are restricted to public spaces due to non-safety, and not participatory too because of incipient trends of rape, crimes against women, and sexual offenses which are analyzed in this paper by info graphs and using statistical tools. This paper also advances in the realm of safety measures and thereon repercussions of the same on a lesser number of crimes against women.

**Keywords:** public spaces, education, crimes against women, empowerment

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<sup>1</sup> Email: [manojrpv2002@gmail.com](mailto:manojrpv2002@gmail.com)

## **1. Introduction**

Our society has ended up being sexist as palpable threats of harassment, sexual violence, and prejudices in domestic and public spaces, with unwelcome remarks and gesture, creates unsafe space for the female gender whether private or public, restricting rights of movement along with human rights violation in forms of femicide, ravishment, assault, it is as if living in a public brothel without access to rights and opportunities.

Widespread awareness led to the culmination in the global forum of sustainable goals 5 and 11, dealing with gender equality and sustainable cities or communities of inclusive characteristics respectively, therefore it's an urgent requirement for a safer, resilient, and encouraging public space with equal access to others too. Although "right to the city" has been intersected by various religions, caste, ethnicity, superstition and belief system, etc., particularly in India, it is deep-rooted in so-called religion and sacredness. Varied experiences of women and men in public spaces fuelled fears and threats of violence and assault.

Certainly, unsafe public spaces work as an impediment to individual and economic growth with unintentional repercussion, which can-not be replenished sooner or later. The female gender treads on a tightrope and hangs on tenterhooks, tethered in the bondage of bangles. Women's safety is often compromised due to negligence either in the urban sector due to the lackadaisical nature of urban bodies. Victims of violence in public spaces and purported remarks even worsen the situation that led to ghettoization within this male-centric society.

True empowerment of women lies in their freedom to publicly spearhead fearlessly in a confident manner and loiter purposefully and engage in public events. Women are generally regarded as a vulnerable section in this manner because they are tethered to household chores, serving household, etc. they are not considered an appropriate candidate for work in the private or corporate sector which limit their ability and accessibility to religious places, educational institution, etc., therefore, issue of women's safety must be included in urban planning and city design.

Limited public space is an indirect form of social exclusion and ostracism, by sentinels in form of patriarchal ideated society and their dominance. Multiple approaches should be followed such as better security measures, an appropriate surveillance system through CCTVs, community engagement, increasing women's participation in public events, and strict legal actions in place for cognizance offenses such as sexual abuse, assault, or any kind of discrimination.

An increase in economic opportunities, addressing health, education, and safety could do to change the structure of society with women encouraging and reducing the number of victims, facing offenses. Today's social reality is the manifestation of the unequal relationship between men and women historically, need of the hour is to reduce this social inequality and imbalance lopsided towards that of men which is abhorrent from the point of view of an ideal society for which world is striving for.

## **2. Literature review**

Potential act of violence annihilates women's "virtue", not their "autonomy" therefore, teaching such as protecting and preserving virtue is imperative. Women's sanctity is deciphered from their virtue in primitive society, therefore violence against women and girls (VAWG) in public space is seen as a threat to her virtue, which takes the various form of prescribed and rigid norms in society(Sur,2014).

Public spaces are often not safe due to victims' ordeal telling the brutal interface of their personal experiences and interface with harsh realities of the social environment therefore public spaces should be truly 'public' in their real sense; they must be accessible to everyone without discrimination or prejudices. Public space terms, the right of every citizen—across class, caste, gender, religion, and sexual orientation must be protected. The city or public spaces can only belong to the female gender when it belongs to everyone (Phadke, 2007).

Women face violence in urban spaces by various means such as either they are scolded for 'being out at the wrong time' or 'provoking the men' though it may doesn't have any existential reality therefore, they are advised to protect themselves by carrying pepper sprays

or of any kind, small sharp objects though not to harm, bags of heavy material to hit, key chains between their knuckles, wear heels or enrolling themselves in self-defence classes and various measures. Restricting mobility in the city cannot be an appropriate measure to tackle the issue of women's safety; as women have as much right to loiter in the city as men in general (Phadke et al., 2009)

There still exists a lacuna between safety standards and proper planning of urban and rural spaces thus, much more is needed to be done which requires the collaborative efforts of various stakeholders viz- government officials, international organizations, women activists, and academicians (John, 1999 & Vaughan, 2013)

Women usually avoid deserted and empty oversight in public spaces, by informal surveillance of different users of public spaces such as 'old-aged people', 'families', 'known vendors', etc. because from there they could get help and get away quickly which ensures better safety majors, therefore, a prerequisite is the active environment, thronging with people round the clock. Active public spaces ensure that they could be heard and helped at the time of the mishap or ill-activity. It is also seen that these activities are most prevalent in JJ clusters, slums, temporary shanties, etc. (Jagori, 2010, pp.17)

Status of women in public spaces report mentions that there have been several instances of molestation, stalking, harassment, rape, and abduction in spaces with poor public facilities, especially in rural areas where inadequate facilities for defecation are less and washrooms are not well maintained, therefore, it increases vulnerability and instances of visual violence. Women encounter and reportedly mention that they are falling victims to staring, and stalking that questions the modesty of women (department of women and child development, Delhi)

By applying an intersectional gender lens, policymakers could encounter differences and experiences of women in public spaces that can lead to culmination in the form of an inclusive and encouraging environment which ensures better safety and community development. In this framework, the role of public policy is so significant for accessible and welcoming spaces that can have an extent bearing on women's social, civic, and economic participation (Women Health, 2021).

### **3. Research Gaps**

While there is existing literature on the analysis of crime in India, no extensive research has been done to analyze the relationship between crimes, violence against women (VAW) in public spaces, and its surrogate response on females in the form of restricted participation in economic activities. Although research has been done on changing scenarios that were for a limited period, however for a better conclusion trend analysis for a longer period is required, therefore, this paper covers the period the year from 2002 to 2020 that would give changing trends. Although there is no dearth of literature and theoretical analysis but less research has been done on empirical, therefore empirical analysis is done to supplement the results for better conclusion.

### **4. Objectives**

This study aims to analyze the prevalence of grim situation of unsafe public spaces for women particularly, besides this, it also tries to identify, review and mention deep-rooted causes of violence against women (VAW) in public spaces. Analyzing the relationship between the development of public spaces and women's safety will help us to provide valuable suggestions in order to improve the condition of victims of congested unsafe urban spaces in India to achieve new heights in an economic and social outlook.

### **5. Research Questions**

The paper has various research objectives. First, what is the relation between the labor force participation rate of women and crimes against women? Second, how does time reflect a bid towards reducing VAW (violence against women) in public spaces? Third, how does the development of public spaces contribute to a lesser number of VAW (violence against women)?

## **6. Hypothesis Tested**

- a. Ho (null hypothesis 1): There is a negative relationship between women's engagement in the labor force and crimes against women.  
Ha (alternative hypothesis): There is a positive relationship between women's engagement in the labor force and crimes against women.
- b. Ho (null hypothesis 2): There exists a strong positive correlation between the total number of crimes (IPC and SLL) and rape, sexual assault, abduction and kidnapping, and time.  
Ha (alternative hypotheses): there exists a strong negative correlation between the total number of crimes (IPC and SLL) and rape, sexual assault, abduction and kidnapping, and time
- c. Ho (null hypothesis 3): Existence of a positive relationship between the developments of public spaces with better planning and less number of crimes against women.  
Ha (alternative hypothesis): there exists a negative relationship between the development of public spaces with better planning and less number of crimes against women.

## **7. Research methodology**

This study restricts itself to statistical and quantitative analysis of certain economic variables such as labor force participation rate of women, crimes against women, the total number of crimes, number of sexual assaults in India, abduction, etc., and data has been taken mostly from National Crime Record Bureau (NCRB) and others are mentioned in references along with period ranging from 2002 to 2020 to avoid novel pandemic i.e. Covid-19 as one of the exceptional circumstance. The paper through these variables highlights how the public spaces for women are unsafe and what is the repercussion on the same in labor force participation rate. Unaddressed issues which require adequate attention are also highlighted to the core with better representation through infographics, statistical summary, econometric tools, etc.

For regression analysis method of ordinary least square is adopted for multiple regression models, without dummy variables concerning time i.e., time series data. This paper follows both descriptive and analytical approaches for better representation with more accurate information. For the third hypothesis, GVI (gender vulnerability index) is used by taking samples from each group that shows which state ensures better safety measures for women in chronological order for better representation of the population and tries to establish the relationship, whether better safety measures for women in some state ensures a lesser number crimes or not.

### **8. Data collection**

Data is purely from secondary data because of the limited scope for interface and primary survey. Most of the data are taken from NCRB (National Crime Record bureau), under the ministry of home affairs, for variables regarding VAW, and data for employment i.e., for women’s participation in the labor force has been taken from the World Bank. For trend analysis, period of study is from the year 2002 to 2020. In India, NCRB publishes criminal procedure code under different heads of IPC (Indian penal code) and SLL (special and local laws), however for total crimes both of the sections are included only as a single section. Data is shown in the appendix. The crimes against women for states are also taken from NCRB reports of 2017 and 2020.

### **9. Regression equations**

- a. For the first hypothesis, the relationship between women’s engagement in the labor force and crimes against women is estimated using the following equation is estimated:

$$Y = B1 + B2(X) \dots\dots\dots (1)$$

Here, Y is our dependent variable i.e., labor force participation rate and X is our independent variable i.e., Crimes against women.

- b. For the second hypothesis, the correlation between a total number of crimes and sexual assault, rape, abduction, etc, the following equation is estimated:

$$Y = B1 + B2 * (X1) + B3 * (X2) + B4 * (X3) \dots\dots\dots (2)$$

Here, Y is our dependent variable i.e., the total number of crimes (IPC and SLL). X1, X2, and X3 are our explanatory variables and represent sexual assault, rape, and abduction respectively.

- c. For the third hypothesis, existence of a positive relationship between the development of public spaces with better planning and less number of crimes against women. The following equation is estimated:

$$Y = B1 + B2 * D1 + B3 * D2 + B4 * D3 \dots\dots\dots (3)$$

Here Y is our dependent variable, and dummy variables D1, D2, and D3 are qualitative variables, where

D1 = 1, for Goa and 0 otherwise

D2 = 1, for Tamil Nādu and 0 otherwise

D3 = 1, for Haryana and 0 otherwise

Also, Delhi is here reference category and for comparison with other states.

### 10. Results

Results of the first regression:

Table 1: OLS, using observations 2002-2020 (T = 19)  
Dependent variable: labour force participation

	Coefficient	SE	t-ratio	p-value
Constant	29.4034	0.564	52.09	0.000***
Crime against women	-0.000244	2.10E-06	-11.16	0.000***



Main Dependent Variable	23.25	SD Dependent variable	2.47	
Sum Squared residual	12.35	SE of Regression	0.85	
R-squared	0.88	Adjusted R-square	0.88	
F(1,17)	134.69	P-value (F)	1.67E-09	
Log Likelihood	-22.87	Akaike Criterion	49.74	
Schwarz Criterion	51.63	Hannan-Quinn	50.06	
rho	0.51	Durbin-Watson	0.97	

Source: Author's calculations

The slope coefficient of the first regression is negative and the interpretation is that as crimes against women increase by one unit then on average there is a fall in the labor force participation rate of women falls by approximately 0 percent which fulfils the pretension and graphically it seems clear that there is a negative relationship between labour force participation rate and crimes against women. R-square for the same is 0.887931 i.e., 88 percent of the variation in labour force participation rate is explained by the variation in crimes against women and 1- R square gives us the percentage that how much variation in the labour force is explained by other factors such as social, fewer availabilities of opportunities, less compatibility, etc. p-value of the slope coefficient is significant therefore we reject the null in favour of the alternative, that there is negative relationship between crimes against women and labour force participation rate.

Results of second regression:

Table 2: OLS, using observations 2002-2020 (T = 19)  
Dependent variable: Total crimes (SLL+IPC)

	coefficient	Std. Error	t-ratio	p-Value
Constant	4.33707e+06	1.48923e+06	2.91	0.0107**
Total sexual offences	19.27	37.58	0.51	0.61

against women				
Rape	-8.94	55.5	-0.16	0.87
Kidnapping and abduction	-12.29	21.53	-0.57	0.57

Mean dependent var	4891605	S.D dependent var	840988.8	
Sum squared resid	122e+13	S.E of regression	903492.5	
R-squared	0.03	Adjusted R-squared	-0.15	
F(3,15)	0,19	P-value(F)	0.89	
Log-likelihood	-285.28	Akaike criterion	578.56	
Schwartz criterion	582.33	Hannan-Quinn	570.20	
rho	0.91	Durbink-Watson	0.32	

Source: Author’s calculations

Table 3: Model 2.1: OLS, using observations 1-19  
Dependent variable: rape

	coefficient	Std. Error	t-ratio	p-Value
Constant	17613.1	14916.9	1.181	0.2540
Total crimes (SLL+IPC)	0.00094	0.0030	0.3114	0.7593

Source: Author’s calculations

By taking rape, sexual assault, and abduction as explanatory variables then there would be a problem of multicollinearity because of wrong signs as expectations are that there exists a positive relationship between the rape of women in public spaces and total crimes. As model 2.1 suggests that as total crimes increase by one unit it leads to an average increase in rape crimes by 0.00093 units, also supported by graphical analysis.

Based on the p-value, the slope coefficient is not statistically significant even at five percent therefore; we do not reject our null hypothesis that there exists a positive correlation between rape against the victim and total crimes (IPC + SLL).

Regression results of third equation:

Table 4: OLS, using observations 1-24  
Dependent variable: Crimes against women

	Coefficient	Std. Error	T-ratio	P-value
Constant	13789.3	682.22	20.21	<0.0001***
D1	-13449.0	964.80	-13.94	<0.0001***
D2	-8095.17	964.80	-8.39	<0.0001***
D3	-1667.83	964.80	-1.72	0.0993*

Mean dependent var	7986.33	S.D. dependent var	5682.88
Sum squared resid	55851311	S.E. of regression	1671.09
R-squared	0.92	Adjusted R-squared	0.91
F(3,20)	81.99	P-value(F)	2.06e-11
Log-likelihood	-209.97	Akaike criterion	427,95
Schwarz criterion	432.66	Hannan-Quinn	429.20

Source: Author's calculations

For the relation between the development of public spaces which ensures measures for safety for women and crimes against women, from GVI ranking of different countries Goa, Tamil Nadu, Haryana, and Delhi are given ranking 1, 10, 19, and 28 respectively therefore, we can confer that there exists a negative relation between better safety of women and crimes against women which could be explicitly seen in the above table that how the cities or state with better safety measures for women can ensure that lesser average number of crimes happens with women, therefore, Delhi which ranks 28th in terms of ensuring safety to women is the city which has highest no of crimes in the sample, whereas Goa which ranks 1st in all the

states/UTs in terms of ensuring women safety led to the culmination in lesser number of crimes.

Although differential intercept coefficients of D1, and D2, are not statistically significant i.e., there is averagely no difference between crime rates in Goa, Tamil Nadu, and Delhi, for Haryana (D3) p-value of differential intercept coefficient is greater than five percent (5%), hence we can conclude that differential intercept coefficient is statically significant at five percent level, or there are averagely crimes in Haryana is less than Delhi by 1667.83. Therefore, for analysis, we cannot say that our null or alternative is accepted or rejected because of contradictory results.

Table 5: State and Crimes against Women

State	Crimes against women
Goa	340.3
Tamil Nādu	5694.13
Haryana	12121.5
Delhi	13789.3

## 11. Conclusion

Crimes against women are reportedly having an increasing trend in recent years although successful measures have been adopted especially in India in the form of free bus rides in some states, installation of closed-circuit televisions (CCTVs) at the nook of most deserted places to deride the purported remarks of violence against women (VAW). “Right to the city” has been conferred upon women which often have been taken for granted which is the pivot of all grievances and instances that have occurred. Sensitizing programs for women’s encouragement have been dealt with enthusiasm for the involvement of men because it has been understood that in this patriarchal society dominated by the male gender does require a change in mindset therefore, better awareness programs such as zero tolerance policy for the crime against women with stringent punishments for reported abuse of rights of women.

Budgetary allocation and recent investment in “smart technologies” can spot miscreants and deploy surveillance technologies for hotspot areas where there is a large number of victims fall into the vicious cycle of embarrassment and shame.

There are various initiatives at the forefront to promote a rights-based approach to guarantee women’s equal rights in cities.

## **12. Suggestions**

Regeneration of public spaces and attention towards healthy social spaces are significantly required due to the increasing number of crimes against the female gender. Safe public spaces involve a social dimension therefore, social equality is inevitable from proper safety measures to redressal of grievances. Gender-centric aspects should be included within the policy frameworks for fruitful results also, to safeguard and promote economic, social, political, and cultural justice for women. For better public facilities, informal and formal surveillance, and increasing participation of women, what is required is an urban renaissance and its regeneration. Revalorization of city centers with mixed-use experiences for a healthy breeding population and the New Deal Policy program (NDP) could replenish deserted space.

Urban planning for disorderly and congested places is required. Although nuanced measures to empower women can bring change with active involvement rather than voiceless beneficiaries.

For healthy and encouraging public spaces for women’s individual contribution, government attention, action-oriented policy, the establishment of redressal committee or organization, regulation of public spaces, self-awareness, empowerment, and active involvement of the public are required for fruitful results and the best outcome out of the resources at our disposal.

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<https://ncrb.gov.in/en/crime-against-women-2003>

## Appendix

### DISCUSSION ON GVI

Gender vulnerable Index (GVI), ranks India in terms of safety ensured to women, compiled under Ministry of Women and Child Development. Data from GVI has been used for regression model first and second, for the relationship between women safety measures or safe public spaces for women and crimes against women, sample states are taken from each four sub sections from GHI for the homogeneity and true representation of the population. States are as follows: Delhi, Haryana, Tamil Nādu, and Kerala. GVI index helped in selection of sample of states.

Table A1: States and GVI

Category	GVI	Rank
Goa	0.656	1
Kerala	0.634	2
Mizoram	0.627	3
Sikkim	0.613	4
Manipur	0.610	5
Himachal Pradesh	0.604	6
Karnataka	0.604	7
Punjab	0.592	8
Maharashtra	0.592	9
Tamil Nadu	0.582	10
Telangana	0.580	11
Andhra Pradesh	0.578	12
Uttarakhand	0.576	13
Nagaland	0.564	14
Chhattisgarh	0.552	15
Gujarat	0.543	16
Tripura	0.530	17
West Bengal	0.519	18
Haryana	0.516	19
Jammu and Kashmir	0.509	20
Meghalaya	0.504	21
Rajasthan	0.496	22
Odisha	0.483	23
Assam	0.483	24
Madhya Pradesh	0.467	25
Arunachal Pradesh	0.452	26
Jharkhand	0.450	27
Delhi	0.436	28
Uttar Pradesh	0.434	29
Rihar	0.410	30

Source: Ministry of Women and Child Development

Table A2: States and Crimes against Women, Data

s no	states	Crimes against women	D1	D2	D3	year
1	Goa	392	1	0	0	
2	Tamilnadu	5919	0	1	0	
3	Haryana	9511	0	0	1	2015
4	Delhi	17222	0	0	0	
5	Goa	371	1	0	0	
6	Tamilnadu	4463	0	1	0	
7	Haryana	9839	0	0	1	2016
8	Delhi	15310	0	0	0	
9	Goa	369	1	0	0	
10	Tamilnadu	5397	0	1	0	
11	Haryana	11370	0	0	1	2017
12	Delhi	13076	0	0	0	
13	Goa	362	1	0	0	
14	Tamilnadu	5822	0	1	0	
15	Haryana	14326	0	0	1	2018
16	Delhi	13640	0	0	0	
17	Goa	329	1	0	0	
18	Tamilnadu	5934	0	1	0	
19	Haryana	14683	0	0	1	2019
20	Delhi	13395	0	0	0	
21	Goa	219	1	0	0	
22	Tamilnadu	6630	0	1	0	
23	Haryana	13000	0	0	1	2020
24	Delhi	10093	0	0	0	

This data has been used in regression model third for showing change in crimes against women in different states.