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## Sexual Assault in Ballari, Karnataka, India: A Four Year Retrospective Review



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### Abstract

Sexual assault is both a common and a very serious crime which is investigated by the police with an intensity second only to that of murder. Despite India stiffening its laws on sexual crimes, nothing much has changed on the ground. The present study aimed to reveal the socio-demographic aspects of sexual assault in Ballari, Karnataka, India.

This retrospective study was conducted on 86 cases of sexual assault received for examination at Vijayanagara institute of medical sciences (VIMS), Ballari, Karnataka, from 2010 - 2013.

This study revealed that incidences of sexual assault were higher in 2011 compared to 2013. It also revealed that

the most vulnerable age group was 11-20 years. Most commonly, sexual crimes were performed by a person familiar to the victim (33.72%). Most victims were medico-legally examined on the second day (46.51%) after the assault. Recent tear of hymen was noticed in 16.66% of female victims. Restrain marks on the victims were present in 25 (29.06%) cases.

The study may help to enhance public awareness regarding sexual violence. It may also help the law enforcement authorities implement strategies to make the society a safer place.

الاعتداء الجنسي في مدينة بالاري، بولاية كارناتاكا، في الهند: مراجعة علمية بأثر رجعي لأربع سنوات سابقة.

### المستخلص

يعد الاعتداء الجنسي جريمة شائعة وخطيرة جداً، والتي يتم التحقيق فيها من قبل الشرطة في الدرجة الثانية من ناحية الحدة بعد جريمة القتل. وعلى الرغم من تشديد الهند لقوانينها المتعلقة بالجرائم الجنسية، فإن شيئاً لم يتغير على الأرض. وقد أجريت هذه الدراسة بهدف الكشف عن الجوانب الديموغرافية الاجتماعية للاعتداء الجنسي في مدينة بالاري، بولاية كارناتاكا، في الهند.

**Keywords:** Forensic Sciences, Forensic Pathology, Sexual Assault, Hymen, Victim, India

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أجريت هذه الدراسة بأثر رجعي على 86 حالة اعتداء جنسي خضعت للفحص في معهد فيجاياناغارا للعلوم الطبية (VIMS)، في مدينة بالاري، بولاية كارناتاكا، خلال الفترة من العام 2010-2013. كشفت هذه الدراسة أن حوادث الاعتداء الجنسي بلغت أعلى معدل عام 2011 بالمقارنة مع عام 2013. وكشفت هذه الدراسة أن الفئة العمرية الأكثر استهدافاً كانت ما بين عمر 11 إلى 20 سنة. وكانت الجرائم الجنسية الأكثر شيوعاً من قبل الشخص المألوف للضحية بنسبة (33.72%). وتم فحص العدد الأقصى للضحايا من الناحية الطبية في اليوم الثاني (46.51%) من الاعتداء. وقد لوحظ وجود تمزق حديث في غشاء البكارة فيما نسبته 16.66% من الضحايا الإناث. وكانت علامات التقييد على الضحايا موجودة في 25 حالة (29.06%).

قد تساعد هذه الدراسة على زيادة الوعي العام بشأن العنف الجنسي. وقد تساعد أيضاً سلطات إنفاذ القانون على تنفيذ استراتيجيات لجعل المجتمع مكاناً آمناً.

الكلمات المفتاحية: علوم الأدلة الجنائية، علم الأمراض الجنائي، الاعتداء الجنسي، غشاء البكارة، الضحية، الهند.

## 1. Introduction

Sexual assault is an act of power and domination of a criminal nature. It is a dehumanizing experience and a profound violation of a human being [1,2].

In India, rape is both a social and criminal problem. It is a subject still shrouded in shame and stigma in a country governed by conventional patriarchy, which means women who have suffered sexual attacks still hesitate to report them to the police for fear of retribution and social isolation [2-5]. The issue of sexual violence received increased attention in India following the fatal gang rape of a Delhi student in late 2012 that grabbed international headlines and

turned focus on the issue of gender equality in the world's largest democracy. But several years after that tragic incident that convulsed Indian society, safe spaces for women are still a long way off [5-7].

According to figures released by the National Crime Records Bureau (NCRB), the total number of rape cases reported in India went up to 33,707 in 2013 from 24,923 in 2012 [5]. In 15,556 cases, the rape victims were aged between 18 and 30 years in 2013. Delhi recorded the highest number of rape cases in the country in 2013 at 1,636, more than double the number in 2012 (706). This was followed by 391 cases in Mumbai, 192 cases in Jaipur and 171 cases in Pune in 2013 [6,7].

The majority of victims were in the 16–25 years age group [9,10]. But the real problem lies in the high attrition rate, with only 14% of reported cases resulting in trials [11,12]. This is because 9% of cases are classified as false allegations [13-15]. One third of reported cases fail to pass the investigation stage due to evidence issues or victim credibility [16-20]. Another third are lost when the victim later withdraws from a case for fear either of being disbelieved or of the criminal justice system or court process. The fact that the majority of assailants are known to the victims and that large numbers of cases are associated with drinking alcohol completes the picture [21-25].

The present study aimed to reveal the sociodemographic aspects of sexual assault in Ballari, Karnataka, India.

## 2. Materials and Methods

A retrospective descriptive study was conducted in the Department of Forensic Medicine, VIMS, Bellary, Karnataka based on the analysis of all autopsy cases of females between 2010 and 2013 that were suspected of being sexu-

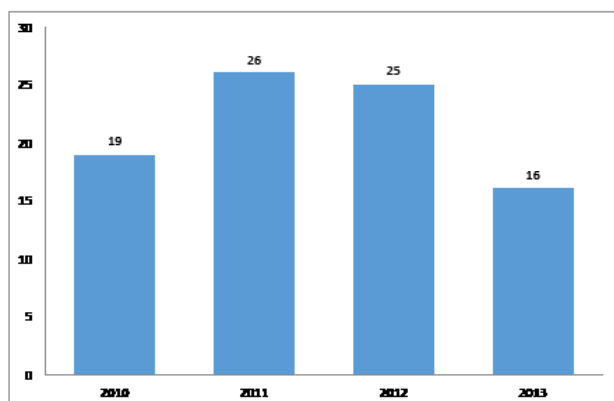


ally abused ( $n = 86$ ).

Cases were determined to be sexual assault according to information derived from crime scene investigations, police investigations, external examination and autopsy findings. All cases with inaccurate data or unclear mode of death were excluded from the study. The demographic data and toxicology findings of the investigated cases were submitted for statistical evaluation by SPSS version 22 (SPSS Inc., Chicago, IL, USA) and were compared to similar studies.

### 3. Results

In the present study, 86 cases of sexual assault were examined from 2010 to 2013 (Figure-1). The majority of victims were males (65.11%) followed by females (34.88%).



**Figure 1-** Total number of cases ( $n=86$ ).

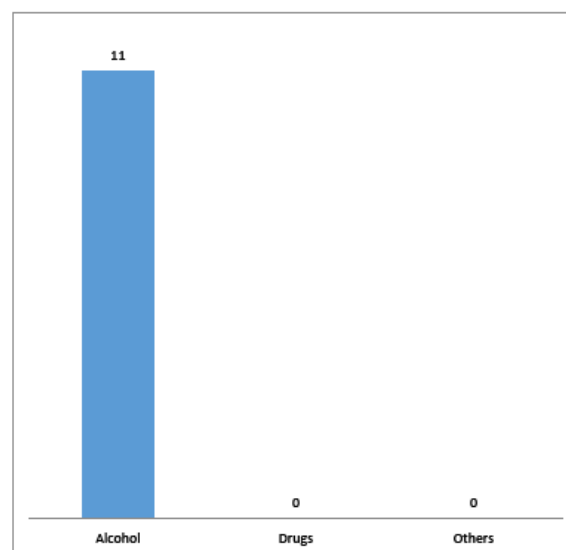
Out of 86 cases, the age of victims ranged from a five-year old child to a sixty-five year-old woman with a mean age of  $17.52 \pm 4.35$  years. The victims between 11-20 years (55.81%) were the most vulnerable to serious violent crime followed by 21- 30 years (22.09 %) of age. Four (4.64%) cases were over 50 years of age (Table-1).

Seventy-six percent of the victims were Hindus and 65 (75.58%) victims of sexual assault were unmarried (Table-1). The majority of the victims ( $n = 22$ ; 37.20%) were

students, followed by housewives ( $n = 22$ ; 25.58%). Most of the victims ( $n = 38$ ; 44.18%) were from urban areas. Most commonly, sexual assaults were reported in the winter season (30.32%) (Table-2).

A vast majority of the victims knew the assailant. In 29 (33.72%) cases, they were relatives of the victims which included cousins, brothers, uncles, step brothers etc. (Table – 3). The common site of assault was the victim's home in 40 cases (46.51%) followed by the outside of the home in 18 cases (20.93%) (Table-4). A total of 86 reported cases had undergone medical examination; of them only 20 (23.25%) of victims were examined on the day of the incident (Table-5). Alcohol intoxication was present in 11 cases (12.79%) (Figure-2).

Recent rupture of the hymen was found in 5 (16.66%)



**Figure 2-** Agent of intoxication in victims ( $n=86$ ).

victims at the 6 o'clock position, and injuries on vaginal mucosa were found mostly at the left lateral wall (Table-6). Semen was detected in 8 (26.66%) cases of female sexual assault on undergarments, pubic hair, clothes and bed sheets. Spermatozoa were detected in 2 (6.66%) cases on vaginal swabs/vaginal smear slides, indicating recent vagi-



**Table 1-** Socio-demographic profile of cases of sexual assault(n=86).

Category	Frequency n = 86		Percentage (%)	
<b>Sex</b>				
Female	30		34.88	
Male	56		65.11	
<b>Age</b>				
Age group (in years)	Female n = 30	Male n = 56	Frequency	Percentage (%)
0-10	0	2	2	2.32
11-20	23	25	48	55.81
21-30	3	16	19	22.09
31-40	2	6	8	9.30
41-50	0	5	5	5.81
51-60	1	2	3	3.48
Above 60	1	0	1	1.16
<b>Religion</b>				
Hindu	66		76.74	
Muslim	20		23.25	
<b>Marital status</b>				
Unmarried	65		75.58	
Married	15		17.44	
Widow	4		4.65	
Divorcee	2		2.32	
<b>Profession</b>				
Students	32		37.20	
Housewives	22		25.58	
Farmer	12		13.95	
Government employees	3		3.48	

Continued on the next page



**Table 1 - (continued)**

Private sector employees	3	3.48
Factory worker/Laborer	8	9.30
Servant/ household work	5	5.81
Mentally retarded/ deaf and dump/ physically handicapped	1	1.16
<b>Habitat</b>		
Rural	21	24.41
Semi-urban	27	31.39
Urban	38	44.18

**Table 2-** *Distribution of cases of sexual assault according to season (n=86).*

Season	Frequency	Percentage (%)
Winter (December –March)	26	30.32
Summer (April-June)	16	18.60
Monsoon (July-September)	24	27.90
Autumn (October-November)	20	23.25

**Table 3-** *Type of relationship of assailant with the victim (n=86).*

Relation to accused	Frequency	Percentage (%)
Close friends	24	27.90
Neighbor	3	3.48
Relative	29	33.72
Strangers	12	13.95
Teacher	8	9.30
Student	5	5.81
Master and servant	2	2.32
Father	2	2.32
Brother	1	1.16



**Table 4-** Distribution of cases of sexual assault according to place of incidence (n=86).

Place of incidence	Frequency	Percentage (%)
Victim's home	40	46.51
Office	1	1.16
Open air ( fields/jungle)	18	20.93
Hotel	1	1.16
Garage	2	2.32
Under Construction building	5	5.81
School campus	15	17.44
Mosque	1	1.16
Prison	3	3.48

**Table 5-** Distribution of cases according to time of examination of victims (n=86).

Time Interval	Frequency	Percentage (%)
Same day	20	23.25
Second day	40	46.51
Third day	10	11.62
Fourth day	7	8.13
Up to 7 days	4	4.65
Up to 14 days	2	2.32
Up to one month	2	2.32
Months	1	1.16

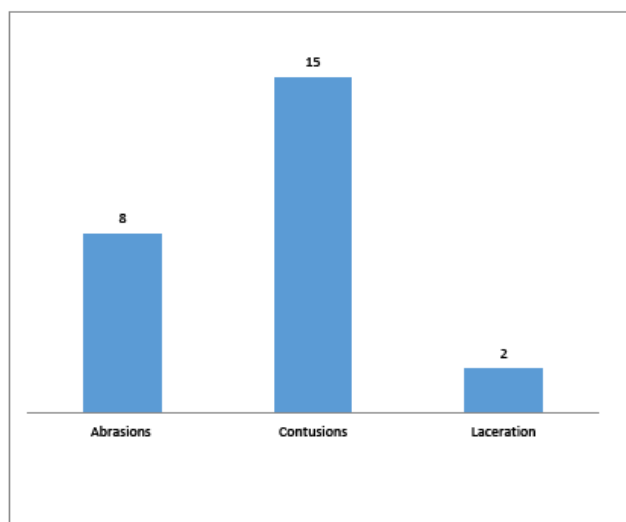
**Table 6-** Condition of Hymen (n=30).

Hymen	Frequency	Percentage (%)
Hymen Intact	8	26.66
Hymen ruptured/torn (old tear)	15	50.00
Hymen ruptured/torn (recent tear)	5	16.66
Hymen absent	2	6.66



nal intercourse.

There were 25 (29.06%) victims who were presented with extra-genital injuries (restrain marks) which included abrasions over the neck, breast, contusions over the arms, forearms and thighs (Figure -3). There were 30 (13.04%) victims who had combined genital and extra-genital injuries. Out of 56 male victims, anal injuries were noted in 25 (44.64%) victims.



**Figure 3-** Restrain marks on the victims (n=86).

#### 4. Discussion

Sexual violence against women is considered as one of the most common crimes all over the world; it violates our cultural and religious values. The number of cases of sexual violence could be higher because many victims do not report then because they are ashamed, embarrassed and afraid of being blamed by the community where they live [13].

This study showed a rising trend from 2010 to 2013, though a slight drop was observed in 2011. In our study, the majority of the victims were males (65.11%) followed by females (34.88%). These results are in contradiction with previous studies undertaken by Bhowmik and Chaliha [7]

Tamuli et al. [2], Sarkar et al. [5] and Bandyopadhyay et al., who reported that most of the victims were females [14].

In the present study, the most vulnerable age was 11-20 years (55.81% of cases) followed by 21-30 years (22.09% of cases). Our study is in agreement with Tailor et al. [15], Demireva et al. [16], Sharma et al. [17], Tamuli et al. [2], Haider et al. [6], Arif et al. [18], Pal et al. [19], Yadav et al. [20], DuMont and Parnis [21], Bandyopadhyay et al. [14], Suri and Sanjeeda [22], and Tariq et al. [23]. From these different studies conducted in different regions, it can be concluded that no age is safe from sexual assault.

Most of the victims were Hindus 66 (76.74%) followed by Muslims. These findings are in agreement with study of Pal et al. [19], Yadav et al. [20], and Bhowmik and Chaliha [7]. This can be explained by the fact that hindus make up the majority of the population in Ballari.

From the subjects in this study, 65 (75.58%) victims were unmarried. Pal et al, [19] reported that 77.14% of victims were unmarried. Similarly, Sukul et al. [24] and Bhowmik and Chaliha [7] observed, respectively, that 77% and 66.93% of victims were unmarried. Bandyopadhyay et al. [14], Parveen et al. [25], and Tamuli et al. [2] found that 63% of the victims were unmarried. Suri and Sanjeeda [22] revealed that 96% victims were unmarried and only 4% were married.

In this study, most of the victims were students, which is in accordance with the study done by Pal et al. [19], who reported that 48.57% of victims were students, while Tailor et al. [15] reported that one quarter (23.4%) of the victims were students. Yadav et al. [20] reported that 51% were students.

Most commonly, sexual crimes were reported in winter (30.32%). These results are in accordance with the study



done by Kaushik et al. [35]. However, these results are contrary to the study of Demireva et al. [16], Tamuli et al. [2], and Sukul et al. [24]. They reported the highest incidence of sexual assault in summer. This can be explained by geographical and seasonal variations between countries.

In the present study, the common site of offence was the victim's home in 40 (46.51%) cases. This is similar to the findings of Sarkar et al. [5] and Grossin et al. [28], who reported the home as the common site of assault in 41.1% of cases followed by the house of the accused in 28.9% of cases. Our findings are contrary to the study of Pal et al. [19], who reported the house of the accused as the common site of offence in 31.42% of cases followed by the house of the victim in 20.0% of cases. Arif et al. [18] reported the commonest place of offence as isolated places in 66.2% of cases followed by the house of the accused in 17.5% of cases.

In this study, 29 (33.72% of cases) victims were sexually assaulted by close relatives. However, Bhowmik and Chaliha [7] reported that only 6.55% of female victims were assaulted by family members and relatives. Pal et al. [19] reported that 8.55% of victims were sexually assaulted by family members. In our study, all the male victims were sexually assaulted by familiar people, which corroborates with the study of Demireva et al. [16] and Bandyopadhyay et al. [14].

The time duration between the sexual act and medico-legal examination is very important to establish the case of sexual assault. In our study, 23.25% of cases were reported on the same day for medical examination. The present study showed that most victims, ( $n = 40$ ; 46.51%) were examined on the day after the assault. In a study by Arif et al. [18], 24.3% of victims were examined on the second

day after the incident, and 17.5% were examined months after the assault, which is in accordance with our study. Haider et al. [6] reported that 37.93% victims were examined on the second day after the incident, while Pal et al. [19] reported that 42.85% of cases were examined on the second day after the incident. Sarkar et al. [5] and Tamuli et al. [2] found that only 23% of cases were reported early for medical examination. This finding highlights that the time of reporting for medico-legal examination after sexual assaults is very important for establishing rape. However, the majority of the victims were reluctant to report because of embarrassment, shame and feeling of guilt [28-30].

This study revealed 3 (3.48%) cases of gang rape with a maximum of three assailants involved in one case. Sarkar et al. [5] observed a similar incidence (7.8%) and Riggs et al. [31] found more than one assailant were involved in 20% of cases.

In this study, 13.04% of victims had genital injuries and 29.06% of victims had extra genital injuries. Among the victims having genital injuries, 16.66% had fresh hymeneal tear and 50% had healed tear of the hymen, which can be attributed to the history of previous sexual act. Kaushik et al. [34] reported genital injuries in 32.3% and extra genital injuries in 21.5% of cases. Sarkar et al. [5] reported rupture of the hymen in 85% of the victims. In our study, all the male victims reported alleged acts of anal penetration, which corroborates with the study of Bhowmik and Chaliha [7].

## 5. Conclusion

An increase in reporting, low conviction rates associated with high attrition rates, public misconception and the lack of information about rape in general summarize





the main issues in sexual assault at present. Also an interesting fact noted in the above study is the increase in sexual assault on males. This could be attributed to the increased awareness and early reporting of these cases. The study led us to conclude that the most vulnerable age group was 11-20 years. Most commonly, sexual crimes were committed by relatives of the victim. In the majority of cases, there was no evidence of forceful sexual intercourse at the time of medical examination due to long post-coital intervals. Delays in medical examination resulted in the loss of vital trace evidence. Hence, prompt reporting is of vital importance to collect medical evidence so that reports generated by forensic experts ultimately help the judiciary to prosecute the assailants.

#### **Ethical Approval: VIMS.N/1TD2/628-1**

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