



ORIGINAL ARTICLE

**Current Scenario of Rape Cases Reported in Healthcare Teaching Hospital in the North East India**

Dev Ashis Ramu Damu,<sup>1,\*</sup> Thoidingjam Bijoy Singh<sup>2</sup> and Huidrom Nabachandra Singh<sup>3</sup>

<sup>1</sup>*Assistant Professor, Department of Forensic Medicine and Toxicology, Sikkim Manipal Institute of Medical Sciences, 5<sup>th</sup> Mile Tadong, Gangtok, Sikkim-737102*

<sup>2</sup>*Professor & Head, Department of Forensic Medicine & Toxicology, Shija Academy of Health Sciences, Manipur University, Langol, Imphal West, Manipur-795004*

<sup>3</sup>*Professor & Head, Department of Forensic Medicine, Zoram Medical College, Falkawn, Aizawl, Mizoram-795006*

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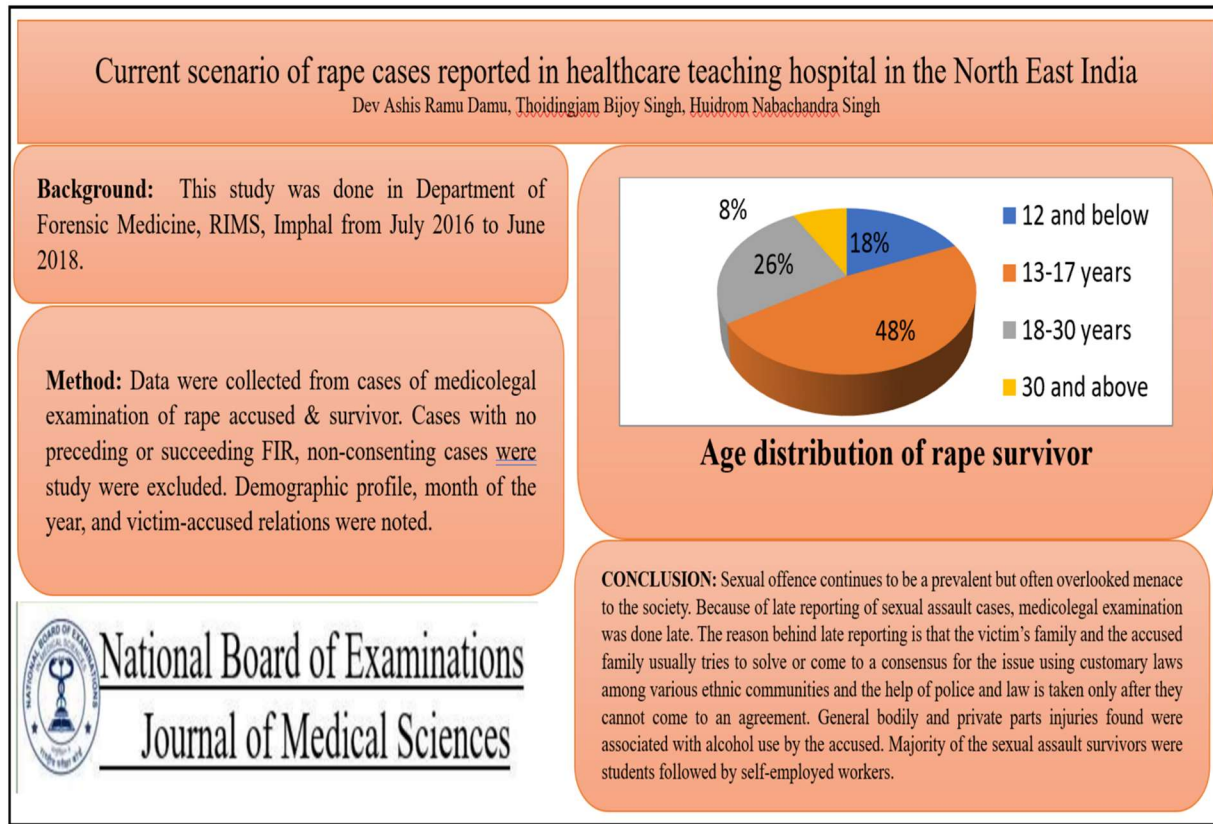
**Abstract**

**Background:** This study was done in Department of Forensic Medicine, RIMS, Imphal from July 2016 to June 2018. **Objectives:** To study trends of rape cases, identifying vulnerable survivors and common offenders and to identify injuries on survivors. **Methods:** Data were collected from cases of medicolegal examination of rape accused & survivor. Cases with no preceding or succeeding FIR, non-consenting cases were study were excluded. Demographic profile, month of the year, and victim-accused relations were noted. **Results:** In 352 cases, 185 were rape survivors & 167 were rape accused. 5.4% had a history of alcohol use by the accused and there is a positive co-relation between alcohol intake and injuries sustained by the survivor. Spermatozoa were detected in 18.56% on microscopic examination but were absent in 81.44%. Acid phosphatase present in 17.3% and absent in 82.7%. **Conclusion:** Sexual offence continues to be a prevalent but often overlooked menace to the society. Because of late reporting of sexual assault cases, medicolegal examination was done late. The reason behind late reporting is that the victim's family and the accused family usually tries to solve or come to a consensus for the issue using customary laws among various ethnic communities and the help of police and law is taken only after they cannot come to an agreement. General bodily and private parts injuries found were associated with alcohol use by the accused. Majority of the sexual assault survivors were students followed by self-employed workers.

**Keywords:** Rape, Alcohol, Students, Known Accused, Social Stigma

Corresponding Author: Dev Ashis Ramu Damu  
Email: rdevashis@gmail.com

## Graphical Abstract



### Introduction

Sexual Assault is sexual violence in which a person is coerced, forced, or threatened to engage in involuntary sexual activity including sexual touching [1]. As per W.H.O “any sexual act regardless of relationship to the survivor, in any setting by any person is sexual violence [2]. Rape is derived from a Latin verb rapere having word which means to snatch, to grab, to carry off, to seize or take away by force, it implies hiding and attacking woman by man for the satisfaction of his sexual desire [3].

Rape not being a diagnosis in medical science but a definition in law. It is a charge made by the investigating officer, on FIR by the survivor [4]. Rape was defined in section 375 IPC5 [5,6,7] and the same is reenacted in

section 63 of the Bharatiya Nyaya Sanhita (BNS) [8].

### Materials and Methods

Materials were collected from the cases of alleged rape. All the survivors without preceding or succeeding police FIR, and all who do not give consent, and or do not want to participate in this study were excluded for this study. Study variables were: Age, occupation, ethnic groups, marital status, urban-rural distribution, socioeconomic status, season of the year, survivor-accused relation etc.

Outcome variables were: common survivors of rape as regards to age, socio-economic status, rural-urban distribution, caste, time and place of occurrence, common offenders of rape. Socio-economic condition

of accused and survivor was noted based on modified Prasad's classification of Per Capita Income [9]. The medicolegal examinations were done following request from investigating officer. A written informed consent was obtained. If the survivor was 12 yrs or less in age or has unsoundness of mind then her parent's consent was obtained in writing. Also, in case the survivor is a minor the consent of the survivor along with her parents were taken. The survivors were identified by the accompanying police personnel whose name, number and designation were recorded. The detail history from survivor and police were recorded separately. When the survivor is below 12 yrs or of unsoundness of mind then her parent's consent was taken. A written informed consent was obtained before beginning the examination. A female attendant was always be present during examination.

Extreme caution was taken up to keep the survivor's identity confidential keeping with the rule of professional secrecy. Approval of Institutional Ethics Committee was obtained with Ref No. A/206/REB-Comm (SP)/RIMS/2015/134/2/2016. Sample collection: The subject was asked to lie in lithotomy position. A female attendant was present to help the subject throughout the procedure. Under aseptic precautions and proper lighting, a sterile cotton tipped swab was introduced in the posterior fornix. A second vaginal swab was also taken using the same procedure. The first swab was immediately used for preparation of two thin smears at the spot-on clean glass slides while the second swab was air dried, stored in a screw capped tube, properly labelled for acid phosphatase analysis.

The smears for study of sperm morphology and the swab for acid phosphatase analysis were done in laboratory of Department of Forensic Medicine. Staining of smear using Haematoxylin and Eosin solutions and Quantitative analysis of Acid phosphatase test was done by using Brentamine Spot Test. The results obtained were recorded systematically.

## Results

A total of 352 cases were examined, out of which 185 cases were survivors and 167 were accused. Out of 185 cases of survivors examined, 65.9% were less than 18 years of age and 34.1% were adult sexual assault cases. The age group distribution of the cases of rape survivor 47.6% belonged to 13 to 17 years, 25.9% belonged to 18-30 years, 18.4% belonged to 12 years and below, and 30 years and above age 8.1%. The Meitei ethnic group constituted the maximum number of cases totalling 77.2%, while Manipuri Muslim constituted 11.4%, Manipuri Tribal 9.2% and Non-Manipuri 2.2% were observed in this study. 76.2% hailed from urban population, 23.8% belonging to rural areas. 73.5% were students followed by self-employed workers 14.1%, 9.7% were Unemployed, professional/government job holders being minimum at 2.7%. 44.3% belonged to lower middle-class family, upper middle class (41.1%), poor family (11.4%) and high class (3.2%). Most of the sexual assaults occurred during the daytime in between 6 a.m to 6 p.m (51.9%) and the rest of it (48.1%) occurred during night time. 51.4% occurred during winter season while 20% cases in autumn, 16.7 % in summer and least cases reported spring season with 11.9%.

29.2% examined were reported for medicolegal examination within 3-7 days, followed by 17.3% were reported after 30 days from the incidence of sexual assault. 16.2% were reported within 7 to 30 days. Only 9.2% were examined within 24 hours and 14.6 % within 48 to 72 hours. 13.5% were reported within 48 to 72 hours. In the present study, 1.6 % of sexual assaults were committed by strangers while 42.1% sexual assaults were committed by boyfriends, followed by neighbours 18.9%. 51.4% cases of sexual assault occurred at the house of the accused followed by 26.4% cases occurred at house of the relatives/ friends of the accused. 13% cases happened at the house of survivors.

Restaurants/Hotels/Isolated places constituted 6.5% and rented house constituted 2.7%. 44.9% were under-matric followed by 28.1% were matriculate. 14.6%

were illiterate and 12.4% were graduate and above. 91.9% were unmarried followed by 7.6% were married and only one case of divorcee 0.5%. 9.2% sustained external injuries while 90.8% are without any external injuries. 5.4% had a history of alcohol used by the accused and there is a positive correlation between the use of alcohol by the accused and external injuries sustained by the survivor (P-value <0.001).

Spermatozoa were detected in 18.56% on microscopic examination but was absent in 81.44 %. Because of late reporting of sexual assault cases for medicolegal examination, spermatozoa detected under microscopic examination was 18.56% and absent in 81.44% (P-value <0.001). Acid phosphatase test for detection of semen was done and detected in 17.3 % and the acid phosphatase test was negative in 82.7% (p-value <0.001) (Figures 1 to 3).

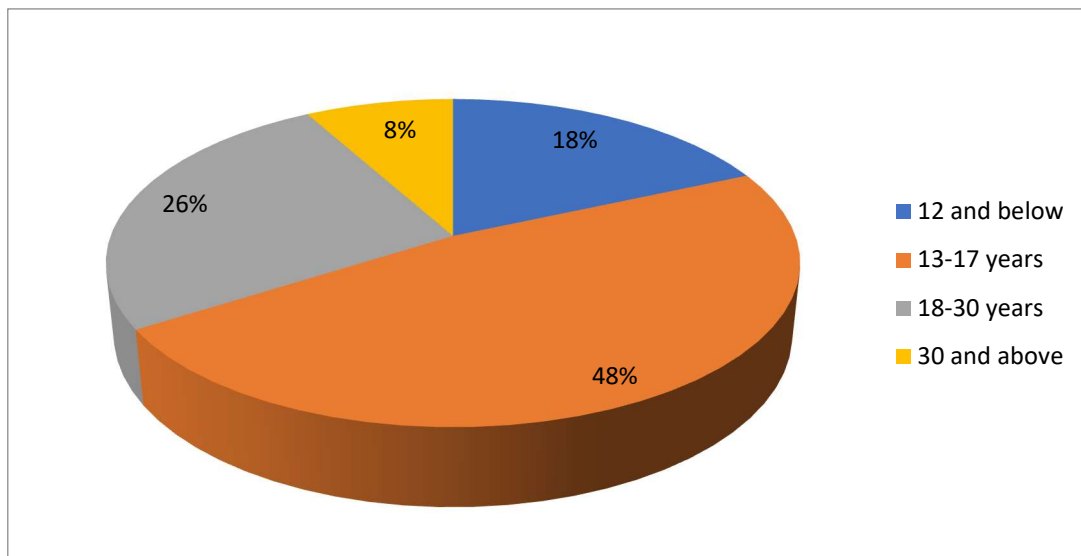


Figure 1. Age distribution of rape survivor

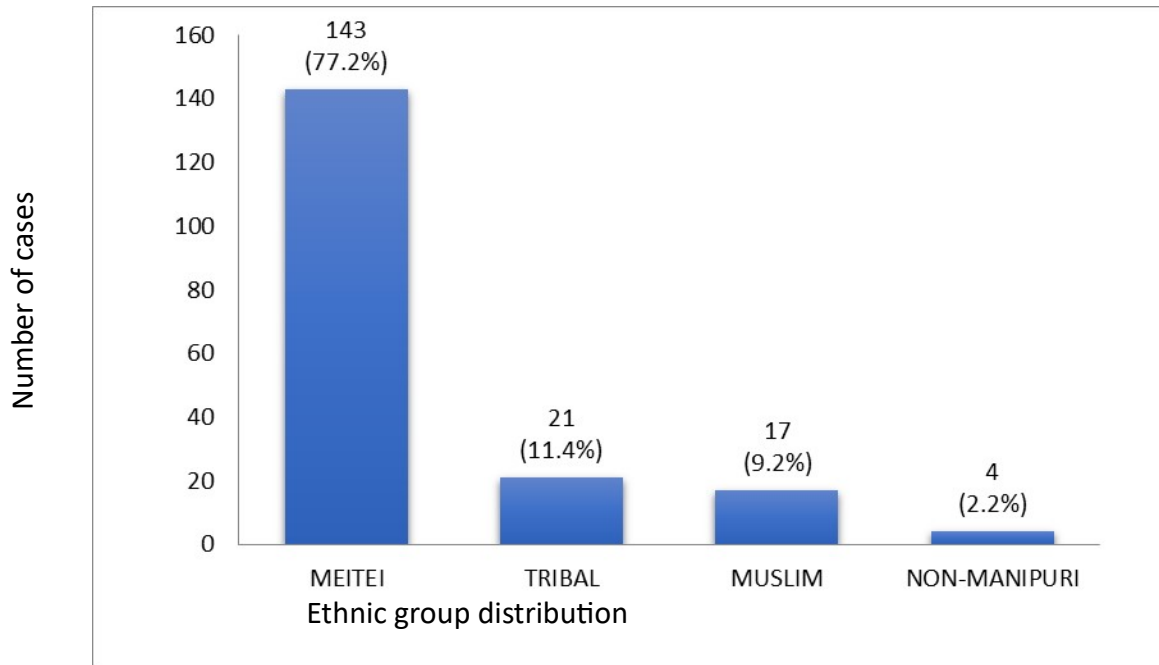


Figure 2. Bar chart showing ethnic group distribution rape survivor

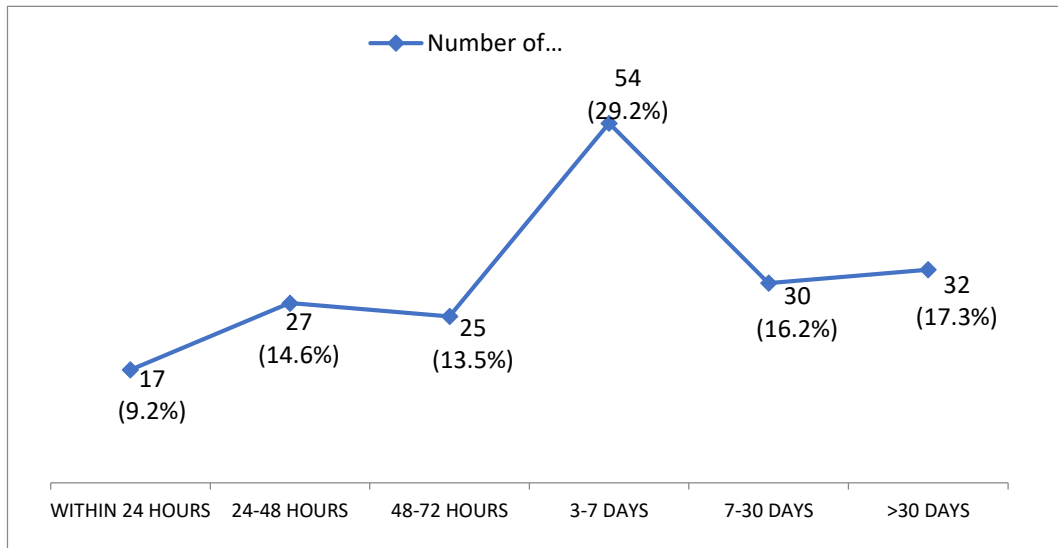


Figure 3. Time lapse between incidence and medicolegal examination

**Discussion**

Sexual offence continues to be a prevalent but often overlooked menace to the society. It is like the tip of iceberg, major part of which is hidden or under reported because of either lack of awareness, fear of social stigma

or tiresome legal procedures. Most of the offences were committed against survivors who were less than 18 years of age. In a study of 182 female undergoing evaluation in 36 hours, half of cases were with injuries. The conclusion was physical evidence examination,

pelvic examination, sperm assays with acid phosphatase, should be advised for cases of sexual assault presenting in first 36 hrs following assault [10]. In a global prevalence study, child sexual assault cases comprised of 19.7% females and 7.9% males. Geographically, Africa accounts for the highest prevalence rate with 34.4% because of high South African rates. Lowest prevalence showed in Europe with rate at 9.2%. America and Asia at 10.1% and 23.9% respectively. Sexual assault in US occurs once in 6.4 mins with 1:6 female raped in lifetime and known person are 4 times likely assaulters, most cases go unreported [11].

Campus study on sexual assault in data from USDOJ shows 13.7% undergraduate women one complete sexual assault. On college entry, 4.7% survivors were forced physically. 7.8% of were stupefied following voluntarily consuming intoxicants and 0.6% assaulted were drugged without their knowledge [12]. Study from British Columbia done on women police service-reported sexual assault cases between 1993 & 1997, among 462 total cases, 151 charges filed and conviction was done in 51. Injury observed in 193 cases, and positive sperm or semen obtained in 100 out of 262 tested [13].

Another study in 418 sexual assaults in 1998 defines two groups, 1<sup>st</sup> group examined with 72 hrs after assault and 2<sup>nd</sup> group after 72 hrs. 86% were women with mean age 22.4 years. 76% in 2<sup>nd</sup> group were less than 15 years. Survivor's residence was the place of the assault with 35% in 1<sup>st</sup> group & 56% in 2<sup>nd</sup> group respectively. Stranger assailants were 51% in 1<sup>st</sup> group. In 2<sup>nd</sup> group, family member was 58% out of which the survivor's father was the assailant in 30% cases. Single assailant was

involved in maximally in both groups. In 30.3% cases, spermatozoa were detected [14].

In a study, female were the most sexually assaulted sex from 78-89% in a study in which 14% age ranges from 0-5yrs, 20% in 6-11yrs & 33% in 12-17yrs age range. More cases were related to groups having low income associated with parental alcoholism, rejection with conflict in marriage. Juvenile committed a third number of cases children. In adult assailants, mostly were less than 30yrs. Family members and acquaintances commit most assaults up to 14 to 47%. Strangers were 7% to 25% [15]. A study from Athens, showed increase in drugs use to facilitate sexual assault across the world with drugs e.g., hypnotics, benzodiazepines, anaesthetics, sedatives, ethanol, etc, whose positive identification in body fluids is difficult due to its short acting nature and amnesia of the incident by the survivor and thereby late reporting incident [16].

One study suggests that sexual violence affects up to a third of women in her lifetime. Most cases go unreported and assailants are known to survivors in more than half of cases. Men and women both can be assaulted sexually but greatest risk is on the women. Vulnerable groups like adolescents, survivors of physical abuse or childhood sexual abuse, differently able individuals, substance and drug abusers, sex workers, persons in poverty or homelessness and prisoners [17]. One study in Hanover, Germany between 2005 to 2007 in which 292 sexual assault survivors were studied of which 283 were females and 9 were males, and 88 alleged accused were examined. 41.8% survivors & 43.2% alleged accused were under alcohol intoxication and influence. Injuries found in 84.9% survivors and 39.8% suspects. 30 survivors have been strangled or

choked. Cytology done in 218 survivors and in 81 cases, sperm detected on vaginal swabs in up to 3 days after the incident. In 7 out of 37 anal swabs, sperm evidence was detected 24 hrs after assault. 22 oral samples came negative for spermatozoa. In 301 sexual assault cases, 171 were proven by forensic medical examination means. Alcohol abusers, differently able persons and persons having psychiatric disorders were vulnerable to sexual assaults [18].

A study with 136 sexual assault cases showed 5.9% false allegation, 44.9% did not get prosecuted, 35.3% were prosecuted, and 13.9% lacked sufficient findings. 8 cases were described false allegations in it 3 were admitted by plaintiff of report fabrication [19]. A study between 2003-2006, 176 alleged rape cases were studied in which 46 were rape opined and 130 were consensual sexual intercourse. It was found that rape survivor does not report to police due to consequent marital disharmony, police and relatives' harassment, humiliating cross examination in court. 130 cases were not opined rape case from victim's history about love affairs, secretly leaving home with their fiancés, living with them for many days, lack of physical signs of resistance prior to coitus, or directly admitting that consent was communicated and litigations were filed because parents could not accept the relationship. 1/4<sup>th</sup> of cases were real rape cases. There were consensual sexual relations in other cases also. Many survivors were students from rural villages. Many were below the age for consent [20].

A study conducted in east Delhi, India in 4yrs from 2001 to 2005 with 50 case of sexual assaults shows 92% of survivors were unmarried female with 62% age ranging from 10 to 19 yrs. Survivors reported incidents were

10%. Acquaintances were 60% of the perpetrators, relatives were 6%. Sexual assault under threat with physical harm or death were noted in 4% cases. 60% filled complaint after 24hrs of incident with 14% had previous sexual assault done to them. 4% were intoxicated with stupefying substance added to food items before the assault. Examination done under anaesthesia were in 19 cases. Genital injury present in 28 in which 14 warranted surgeries. Other injuries were present in 5 cases out of which 1 in the eyes, 2 with limb fractures, and 2 suffered intra-abdominal injuries. 2 survivors suffered acute stress reaction and needed psychiatric intervention. 1 case resulted into death of the victim [21].

Another study on sexual assault conducted in south Delhi from 2001 and 2002 shows 88.9% female & 11.1% male. Age ranged from 4yrs and 60 yrs with 68.9% were from 11 to 20 yrs, 12.2% belonged in 0 to 10 yrs, and 5 males were from 6yrs to 10yrs. 2.2% survivor were more than 50 yrs age group. The female survivors maximum from 16yrs to 20yrs group and males from 6yrs to 10yrs group. 75.5% were Hindu. 81.1% of all cases were unmarried females. Most of the survivors were from poor socioeconomic conditions, and were less educationally qualified. The alleged accused mostly close friends and acquaintance, with 22% unknown individuals. 41.4% incident occurred in house of survivors, and 28.9% at the house of assailant. 5 showed positive sperm and 3 were positive of acid phosphatase out of 73 swabs tested [22]. A study on medico legal and social aspects of rape survivors conducted between 2005 and 2007 showed out of 80 studied cases 37.5% were from 16yrs to 20 yrs, 35% were from 10yrs to 15 yrs and 2.5% were above 30 yrs age group [23].

A study on 50 cases of alleged rape from 2007 to 2008 finds age is an important variable with younger age group being most vulnerable. Majority were 12 to 18 yrs of age. 90.40% were known accused to the survivors and 9.52% were strangers. 33.33% occurred at survivor's residence and 47.60% were unrelated, 9.53% accused person's residence and 9.52% in deserted open areas [24]. Another study in Delhi on 100 rape survivors, 34% were illiterate, and 37 % were educated up to 12<sup>th</sup> standard. Age range were 11 yrs to 30 yrs. 32% in age group of 11 yrs to 15 yrs were maximally involved. Adolescents included 76.9% of the victims. 96% of total cases were unmarried. 48% cases had no biological parent or had one biological parent, parents living separately, orphan, or with step father or mother. As reported by the survivors, 25% parents had history substance abuse. 78% cases perpetrator knew the victim and 22% cases were total stranger. 32% were sexually assaulted by close family member and relatives, 19% assailant were neighbours and 9% were father, 12% whereas other known person e.g. masters, colleague, neighbour [25].

In a study on survivors of sexual assault, 71.6% belonged to 14yrs to 17yrs, mean age of 16yrs. 80.9% survivors from urban areas, 99% were educated. 48.9% were household workers and 23.4% students. 141 cases studied in which 57 were with the accused for few hours, 58 cases stayed for some days, and in 26 cases they lived together for many months and came back by themselves or were brought by police with complaint lodged by their parents. 83.7% cases, sexual activity were consensual [26].

A study conducted on 230 female sexually assaulted survivors in Dhaka, Bangladesh in the year 2006 revealed that 57%

were 11yrs to 20 yrs age and 11.30% were in 21yrs to 30 yrs age group. Over three-fourths 76.08% of rape survivors were Muslims, unmarried were 78.69%, 77.89 % belonged to poor socio-economic background, 32.18% were less educated. 43.91% knew the assailants, 30.43% cases were close friends. 36.95% incident occurred in victim's house which was maximum, 31.30% occurred in Boys' hostel [27]. A study on 53 survivors of sexual assault, 51 were female and 2 were males. 40% of which were from 21yrs to 30 yrs, and 36% were from 11yrs to 20years age group of which 64% were below 18 yrs age. Alleged accused were known in 47 cases to the rape survivors. As per history, 25 cases were consensual and 28 cases were forced, 3 cases were under intoxication at the time of incident. 34 were unmarried, 12 victims were married, 3 were divorced, and 2 were widow [28].

In a sexual violence and its relation to health study in female age group of 13yrs to 24 yrs shows 32% reported sexual violence before age 18 yrs. Most common (32.3%) first offenders were respondent's male neighbours, and 26.2% were boyfriends [29]. A casualty department of tertiary care study including 221 cases from year 2010 to 2013, showed that majority rape survivors were 20 yrs of age and above, 9% were less than 5 yrs in which youngest being 18months. Maximum cases were from poor socio-economic status, were uneducated, and unmarried. Restrain 51% of survivors were. Single incident sexual assault survivors were maximum except for 34% of them who were assaulted multiple times. One person accused were in 85% cases, and for 15% were gang raped. 2% cases had 5 or more than 5 accused. In 14% of cases the alleged accused and the rape survivor were relatives, 64% knew each other, 22% accused were unknown



assailants. 58% cases were reported within first 24hrs. 86% were peno-vaginal, 4% were peno-oral, 3% were peno-anal & 7% had no history of penetration. 6% were pregnant on examination. 13.5% suffered injuries [30]. A study done in Lahore, Pakistan between 2012 to 2013, total 19 cases with ages from 4yrs to 18 yrs there were 79% girls and 21% boys. Maximum cases of 57.89 % were from 12yrs to 15 yrs age group. 57.89 % were from 16yrs to 18yrsof age. All the cases were from lower socioeconomic condition and they were from urban location. 42.1% cases survivors knew the assailants. 26% were cases involving multiple perpetrators. Location of the incident were accused residence in 57.89%. Verbal threat were given in 21.05% cases, physical force used in 15.78% cases. Injuries on the body of survivor were seen in 10.52% cases [31].

A 2010 study in Guwahati on 382 rape survivors, 376 were female (98.43%) and 1 intersex. 61% were unmarried & 2% were widows. Most survivors were Hindus. Age group 11yrs to 20 yrs constituted 55.76%. Maximum cases were reported in month of October followed by November. Cases were maximum from low educational level up to high school. Most accused were boyfriend. The place of incidence was rented apartments. 19 cases were pregnant at examination [32].

Analytical 8yrs study on sexual assault in Manipur between 1990-1997, 40.7% were 13-20 years with next 30.2% from 21-30 years age group, 19.8% were children. Meitei Hindus 68.6%, Meitei Muslim 14%, 11.6% Christians. Victims were 79.1% literate students, 69.7% accused were acquaintance, and 25% were strangers. Associated general injuries seen with strangers [33]. Another sexual assault survivor study in Imphal and vicinity between 1998 to 2003, in total of 69 cases, rural areas include 44

and 25 were in urban areas. 41 were literate and illiterate were 28. 91.3% were unmarried, majority 82.6% were Meitei and 8.7% were Tribal, 7.2% were non-Manipuri and 1.5% Muslims. 50.75% age group 12-20 years, 29% child with youngest was of only 3yrs and oldest being 70yrs age. 76.8% assailants were from acquaintance (neighbours, boyfriends, admirers, relatives) and strangers were 18.8% [34].

A study on child rape in Manipur in 20 yrs period found that rape incidence in child was higher in 1996 and 2002 with each 11.54% and no cases in 1985, 1986, 1994, and least in 1987 with 1.90%. Hindus were 92.33% and next Christian 5.77% and Muslim victim 1.90%. Rural 67.30% and urban 32.70%. Summer months from May to July is highest with 36.53% and less in winter with 17.31%. Crime scene was accused person's house in 36.53%, with next was victims' house in 21.15%. 86.54% accused were known to victim. Among-them some were close relatives and their friends and 13.46% were strangers. Age of alleged accused varies widely [35].

A study on 210 alleged sexual assault cases in Imphal, 8% were found to be date rape cases. 11.6% and 13.4% date rapes were found in 2012 and 2013 respectively. Up until year 2009, no date rape cases were reported. 70.5% of the rape survivors belonged to Meitei community who were less than 20 yrs age. 82.3% were school or college students. Most assaults were seen in afternoon or in early evening. In 52.9% cases, location of incident were hotels or poorly lit restaurants and 17.6% were in a common friend's residence. 52.9% were found with alcohol use, and in 23.5% cases suspected anaesthetic inhalant were used [36].

A sexual assault study in 144 cases in Manipur showed 51.4% were children and the cases increased from 6.5% in 2006 to 29.7% in 2011. 98.7% were females and maximum of 68.9% belonged to Meitei's community. 13.5% cases were non-Manipuri. The mean age of victims in the study was 12.4 yrs. 40.54% cases occurred assailant's or his friend residence. 16.22% children below 15yrs occurred in their primary residence. Very few cases occurred in the night. Maximum cases of 89.15% occurred in afternoon or early evening. 78.4% of assailants were known to children and 9.5% were total strangers [37]. A study from 2007-2011 on 224 cases, majority were rape victims and accused persons. Most were elopement cases. Disagreements among either party were seen and rape charges were filed against the accused following elopement (sec 137BNS [8] & sec 63BNS). When these cases were carefully examined with through history and personal interview with both the alleged accused and rape survivor, they were elopement cases. Only few were actual rape cases [38].

A study in Imphal, Manipur from 2005-2011, increasing trends were seen with maximum cases were in the year 2011. 51% of rape survivors were students. 34% cases occurred in summer months and 40% cases occurred in the afternoon as a preferred timing. In 83% cases, accused were known to the victim and the crime occurred in alleged accused residence [39].

### **Conclusion**

Because of late reporting of sexual assault cases, medicolegal examination was done late. The reason behind late reporting is that the survivor's family and the accused family usually tries to solve or come to a

consensus for the issue using customary laws among various ethnic communities and the help of police and law is taken only after they cannot come to an agreement. So, spreading awareness amongst the public for prompt medical examination of any suspected sexual assault, collection of swabs and preservation of evidence on the clothes and not to clean private parts before medicolegal examination are the need of the hour. The offenders were known to the rape survivors.

General bodily and private parts injuries found were associated with alcohol use by the accused. Majority of the sexual assault survivors were students followed by self-employed workers. To prevent such crime, stringent laws be passed by legislatures and properly enacted and enforced by law enforcement agencies. Education of women's rights & healthcare facilities is needed. Continuous efforts to raise awareness against rape is must.

### **Ethical Approval**

Approval of Institutional Ethics Committee was obtained with Ref No. A/206/REB-Comm (SP)/RIMS/2015/134/2/2016

### **Statements and Declarations**

#### **Conflicts of interest**

The authors declares that they do not have conflict of interest.

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