

# PHYSICAL AND LABORATORY FINDINGS IN ADULT FEMALE SEXUAL CASES AT DISTRICT PESHAWAR

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## ABSTRACT

**Objective:** To determine frequency, percentage and correlations between physical and laboratory findings in adult female sexual assault cases in Peshawar district.

**Material and Methods:** This cross sectional retro prospective chart review study was conducted in department of Forensic Medicine Khyber Medical College, Peshawar-Pakistan from Jan 2017 to Dec 2017. 51 samples with police inquest were included in the study, limitations and exclusion criteria were defined. Pre designed questionnaire was used for data collection while SPSS.20.0 was used for data analysis.

**Results:** Out of 80 female samples 29 (36.3%) were cases of child abuse where as age group between 11-30 years was the most vulnerable age group. Urban areas proved to have maximum reported cases while among seasons many cases were reported in winters. Police station Bana Mari had maximum cases of sexual assault followed by Faqirabab and Phari Pura.

**Conclusion:** Sexual assault being important but neglected social issue was well addressed through this study, and enlightened the places, age groups and reason which are mostly involved in increasing such number of cases.

**Key Words:** Assault, Violence, Childhood abuse, Medico legal aspects

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## INTRODUCTION

Sexuality is one of the important aspect of life and normal well being of mankind, healthy sexual life is human right where violence is a gross violation of human rights<sup>1</sup>. "Sexual violence" is defined as any coerced sexual activity, which involves sexual move, any attempt, commenting, or acts considered against a person's sexuality using coercion, by anyone irrespective of his/her relationship to the person, at any place, including home, business place, workplace etc while anything making physical contact comes in category of sexual assault as per definition set by World Health Organization<sup>2</sup>.

Violence in terms of sexual life is a major mishap that is affecting many i.e millions of people each year.

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The victim is at risk of being abused again and again<sup>3</sup>. It is one of most common form of criminal violence throughout the world, which can be found at all levels of our society, and not constrained to any special race, class, income community or educational level<sup>4</sup>. Current studies shows a very drastic impact of sexual abuse upon victims mental with physical and social health. It is also seen that the same victims are less happy with their current relationships with fear of sex, arousal dysfunctions are the common sexual disturbance in these victims<sup>5</sup>. Prevalence of many types of sexual violence exists, ranges from area to area, available data which is just tip of ice berg are drawn from various population using a variety of measures in sexual assault by which failure to report affects the data on many occasions<sup>6</sup>. It has been estimated that one out of every five female in world experience some sort of violence in their full lives<sup>7</sup>.

With passing time more and more sexual assault cases are being reported, through this study with identification of vulnerable age for sexual assault, the study will also enlighten the details of physical examinations

of such patients correlating with laboratory findings. The objectives of the study are to determine frequency, percentage and correlations between physical and laboratory findings in adult female sexual assault cases in Peshawar district.

**MATERIAL AND METHODS**

This cross sectional descriptive chart review was conducted in department of Forensic Medicine Khyber Medical College, Peshawar from Jan 2017 to Dec 2017. Samples of 55 female subjects having different age above 18 Years were presented to the department with police inquest were included in the study. Any female with age below 18 Years presenting without police inquest were excluded from study. Cultural, social and religious norms were among few limitations being faced. Fluorescence microscopy<sup>8</sup> was used in laboratory to detect the sperms from the vaginal swabs taken where as internal examination was done by Doctor on duty using speculum. Data was collected by reviewing chart of the samples having questions related to bio-data and examination which was then analyzed by using SPSS version 21.0. Mean ± standard deviation was calculated for numerical variables like age. Frequency and Percentage was calculated for categorical variables. Chi-square was applied among categorical variables for comparison P<0.05 was considered to be significant. Results were presented in graphical and tabulated forms.

**RESULTS**

55 samples were under study out of which maximum cases were of age between 21-30 Years with a mean of 28.3 ± 8.340 Years. Details based on Fig 1. The study shows 38 (69.1%) cases reported from urban areas where 17 (30.9%) being reported from the rural areas. The study also has an evident picture of maximum cases being reported during summer weather, details based on Table 1.

The study results suggest that 22 (40%) are being positive for sperm detection on Fluorescence microscopy while rest 33 (60%) are negative. In the physical examination maximum samples had old hymenal injury 27 (49.1%) followed by fresh hymenal injury and no

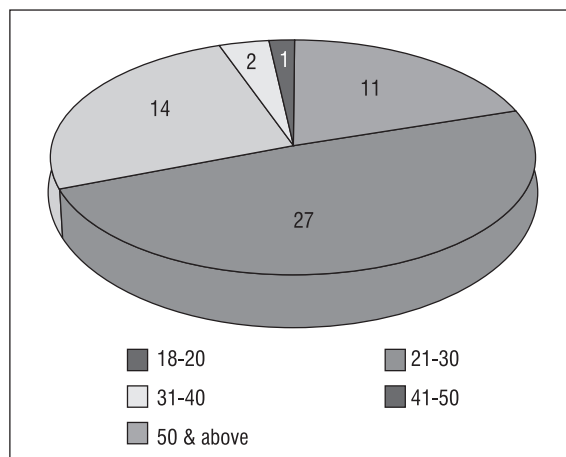


Figure 1: Age wise distribution of adult sexual assault cases (n=55)

**Table 1: Month wise distribution of cases (n=55)**

Month	Frequency	Percent	Valid Percent	Cumulative Percent
January	4	7.3	7.3	7.3
February	4	7.3	7.3	14.5
March	4	7.3	7.3	21.8
April	8	14.5	14.5	36.4
May	3	5.5	5.5	41.8
June	3	5.5	5.5	47.3
July	6	10.9	10.9	58.2
August	4	7.3	7.3	65.5
September	2	3.6	3.6	69.1
October	1	1.8	1.8	70.9
November	2	3.6	3.6	74.5
December	14	25.5	25.5	100.0
Total	55	100.0	100.0	

Table 2: Comparison between Physical Findings with Laboratory results (n=55)

Physical Findings * Laboratory Result Positive Crosstabulation						
Count						
		Laboratory Result Positive		Total	df	Asymptotic Significance (2-sided)
		Positive	Negative			
Physical Findings	Fresh Hymenal Injury	12	2	14	1	0.001
	Old Hymenal Injury	10	17	27		0.660
	No Injury	0	14	14		0.000

injury as 14 (25.5%) each. The comparison of these two variables were done and represented in Table # 2 clearly suggesting fresh hymenal injury and no injury being significant for its laboratory results.

### DISCUSSION

On basis of data extracted that the incidence of age comparison with study by Sweta Lal et al and Namita et al showed almost result in contrast in having maximum number of cases reported between 11-20 years whereas in our study maximum number of cases are in 21-30 years, the same figure is in similarity with another study at India by Tripathi KM et al<sup>9,11</sup>. In this unique study, only 55 female adult subjects were reported to this department which is not true representation of actual number because of norms of our social, cultural and religious sector. Early puberty, college going, initial time at job, etc are proved to be age having maximum number of such cases as shown by Cybulska B in a study conducted at UK between year 2005 & 2006 similarly a second study by Rawat et al on a 10 Years data from 2004-2013 showed the same age group involved and were the key target for assailants<sup>12,13</sup>. The results extracted shows that Urban areas has maximum of such cases with 69.1% cases for which reason is illiteracy in rural areas making people ignorant about all such incidents other than limitations. This 3:1 (Urban:Rural) as extracted from the study is same as produced in another at Egypt between 2012 & 2013<sup>14</sup>.

The immediate complication of such cases are genital and non genital injuries of which genital is most importance which shows 74.54% (Fresh/Old Tears) with 25.5 % as fresh hymenal injury cases and 49.1% as old hymenal injury cases. This 1:2 (Fresh Hymenal Injury: Old Hymenal Injury) contradicts a study conducted at India which has a ratio of 1:4. 9 In a study conducted at Ethopia almost 44% of swabs taken from microscopy were positive for sperms which are in similarity with the results of this study having 40% positive lab results<sup>15</sup>.

The reason for maximum negative results can be due to washing of the genital area with water by the victim due to ignorance. The study is also suggestive of maximum cases reported on months having long days and short nights i.e summers. The study shows a very significant relationship between all fresh hymenal injury cases with positive lab results and negative results with no injury (suggestive of intention not sexual assault in particular) which the old hymenal injury has no significance with lab findings.

### CONCLUSION

Information about sexual assault cases is always little due to limitations and ignorance but with limited data this study has enlightened the vulnerable age, location (Urban) and compared physical examination with laboratory findings clearly showing that fresh hymenal injury and no injury being significant where as old hymenal injury non significant.

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#### **AUTHOR'S CONTRIBUTION**

Following authors have made substantial contributions to the manuscript as under:

- Alam N:** Conception and design.  
**Naveed S:** Collection and assembly of data.  
**Ahmad MS:** Analysis and interpretation of the data.  
**Aziz I:** Critical revision of the article for important intellectual content.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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