

# Predictors of location of rape: A survey of victim's location in Gombe state, North-East Nigeria

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## ABSTRACT

**Aims:** To determine the predictors of rape location among victims in Gombe.

**Settings and Design:** Cross-sectional retrospective.

**Methods and Material:** Cases of alleged rape that presented at a secondary health facility from August 2016-July 2018 were retrieved.

**Statistical Analysis Used:** SPSS version 20.

**Results:** The majority of cases were between the ages of 5–14 years (66.1%). Up to 26% of the victims were males. For 65.7% of the cases, the perpetrators were not known to the victim. The perpetrator's residence or office was the most commonplace of rape occurrence (49.5%). More victims (60.7%) who were less than 5 were raped in the perpetrator's home/office, compared to 43.6% of those who were between 15–24 years. Also, 50% of those with tertiary educational qualifications were raped in their homes compared to 10% of those with primary educational qualifications. Rape was carried out in uncompleted building/bush for perpetrators who were known to the victim compared to 6.3% of those who the victims did not know. There are a higher odds of rape carried out in the perpetrator's or victim's home among those who are familiar with the perpetrator compared to those who are not familiar to the perpetrator (odds ratio (OR): 0.36; confidence interval (CI): 0.200–0.656). The odds of rape occurring by a known person is 3.4 times more likely to occur in the perpetrator's house/office compared to it occurring in an uncompleted building or bush (*P* value 0.007 with a CI of 1.396–8.562).

**Conclusions:** It is recommended that children should be placed in schools to minimize child labor and the public should be made aware of the possibility of rape by known persons in lonely places and at home.

**Key words:** Determinants; location; rape.

## Introduction

The attention of the world has over the last few years been drawn to a rising trend of rape and sexual assault globally.<sup>[1,2]</sup> This ugly occurrence constitutes a gross violation of the human rights of the victims with severe consequences.<sup>[3-6]</sup>

The location of rape is very important in determining measures that can be put in place to minimize the menace.<sup>[7-10]</sup>

This study looks at determinants of the location of rape among victims who presented at a secondary healthcare facility in Gombe, North-East Nigeria.

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## Subjects and Methods

This was a questionnaire and secondary data analysis conducted at the Special Gender-Based Violence Unit of the Specialist Hospital Gombe. Information and case records of victims were obtained from the records department, accident and emergency Unit and the gynecological emergency unit. A total of 277 case notes of victims who alleged rape were retrospectively reviewed for a period of 2 years (August 2016 to July 2018) Information was also obtained using phones and through home visits of the victims. A semi-structured open and closed-ended interviewer-administered questionnaire was used to obtain information such as socio-demographic data, location of the assault, number of perpetrators, relationship of the victim and perpetrator, type of injury sustained (if any), the interval between incident and reporting. Information obtained was entered into a data sheet and transferred to software for analysis. Data obtained were processed and analyzed using Statistical Package for the Social Sciences (SPSS) 20.0 version. Data were presented using percentages, Chi-square, and odds ratio (OR) with the determination of associations between variables where application. A 95% confidence interval was used and a *P* value of <0.05 was considered statistically significant. Ethical clearance was obtained from the Gombe State Ministry of Health Ethical Committee and permission to access case records and registers was obtained from the management of the State Specialist Hospital Gombe while a signed consent was obtained from each victim before the questionnaire was administered to them.

Inclusion criteria: anybody reporting to the hospital for rape irrespective of gender, tribe, race or age. Exclusion criteria: incomplete data, refusal to take part, refusal to sign consent.

## Results

The majority of the study population were between the ages of 5–14 years, unmarried and Muslims (66.1%, 95.7%, and 85.2% respectively). Also, 48% and 58% of the study population had no education and were Hausa/Fulani, respectively. In addition, up to 26% of the victims were males [Table 1].

Table 1: Socio-demographic characteristics of rape victims

Table 2: Sociodemographic characteristics of perpetrators

About 88.4% of the perpetrators of rape were between the ages of 16–40. In 65.7% of the cases, the perpetrators were not familiar or known to the victims, while in 84% of cases, only one perpetrator was involved. The perpetrator's residence or

**Table 1: Socio-demographic characteristics of rape victims**

Variable	n=277 F (%)
Age of victim	
<5	28 (10.1)
5-14	183 (66.1)
15-24	55 (19.9)
25-34	8 (2.9)
35-45	3 (1.1)
Sex	
Male	72 (26.0)
Female	205 (74.0)
Marital status	
Married	12 (4.3)
Unmarried	265 (95.7)
Level of education	
None	133 (48.0)
Primary	85 (30.7)
Secondary	55 (19.9)
Tertiary	4 (1.4)
Occupation	
Unemployed/under care	134 (49.4)
Students	124 (44.8)
Employed	19 (6.9)
Tribe	
Hausa/Fulani	163 (58.8)
Tangale/waja	8 (2.9)
Others	46 (16.6)
Non response	60 (21.7)
Religion	
Islam	236 (85.2)
Christian	39 (14.1)
Non-response	2 (7.0)

**Table 2: Sociodemographic characteristics of perpetrators**

Variable	n=277 F (%)
Age of perpetrator	
<15 yrs	7 (2.5)
16-40 yrs	245 (88.4)
>40 yrs	18 (6.5)
Unknown	7 (2.5)
Number of perpetrators	
1	235 (84.8)
2-4	33 (11.9)
>5	7 (2.5)
Unknown	2 (0.7)
Relationship of victim with perpetrator	
Unknown	182 (65.7)
Boyfriend	5 (1.7)
Close family member	18 (6.1)
Clergy	2 (0.7)
Teacher/lecturer	4 (1.7)
Neighbour	57 (20.6)
Others	10 (3.6)
Place of act	
Bush/uncompleted building	43 (15.5)
Victims residence	41 (14.8)
Perpetrators residence/office	137 (49.5)
Other	56 (20.2)

office was the most commonplace of rape occurrence(49.5%). It was statistically significant *p*-value 0.001.

Table 3: Factors that determine the place of rape

**Table 3: Factors that determine of place of rape**

VARIABLE	Bush/uncompleted Building	Victim's home	Perpetrators home/office	Others			
	n=43	n=41	n=137	n=56	X <sup>2</sup>	df	P
Age of victim					20.820	12	0.053
<5	6 (21.4)	3 (10.7)	17 (60.7)	2 (7.1)			
5-14	26 (14.2)	21 (11.5)	92 (50.3)	44 (24.0)			
15-24	9 (16.4)	14 (25.5)	24 (43.6)	8 (14.5)			
25-34	2 (25.0)	1 (12.5)	4 (50.0)	1 (12.5)			
35-45	0 (0)	2 (66.7)	0 (0)	1 (33.3)			
Sex					0.950	1	0.813
Male	12 (16.7)	10 (13.9)	33 (45.8)	17 (23.6)			
Female	31 (15.1)	31 (15.1)	104 (50.7)	39 (19.0)			
Marital status					1.595	3	0.861
Married	1 (8.3)	3 (25.0)	5 (41.7)	3 (25.0)			
Not married	42 (15.8)	38 (14.3)	132 (49.8)	53 (20.0)			
Level of education					19.150	9	0.024
None	17 (12.8)	22 (16.5)	70 (52.6)	24 (16.0)			
Primary	11 (12.9)	9 (10.6)	42 (49.4)	23 (27.1)			
Secondary	15 (27.3)	8 (14.5)	25 (45.5)	7 (12.7)			
Tertiary	0 (0)	2 (50.0)	0 (0)	2 (50.0)			
Time of incidence					7.907	6	0.245
Day	32 (16.1)	26 (13.1)	98 (49.2)	43 (29.6)			
Night	10 (13.9)	12 (16.7)	38 (52.8)	12 (16.7)			
Non- response	1 (16.7)	9 (50.0)	1 (16.7)	1 (16.7)			
Age of perpetrator					7.491	9	0.586
<15 yrs	3 (42.9)	0 (0)	3 (42.9)	1 (14.3)			
16-40 yrs	36 (14.7)	39 (15.9)	120 (49.0)	50 (20.4)			
>40 yrs	2 (11.1)	2 (11.1)	10 (55.6)	4 (22.2)			
Unknown	2 (28.6)	0 (0)	4 (57.1)	1 (14.3)			
Perpetrator known					16.849	1	0.001
Yes	37 (20.3)	20 (11.0)	83 (45.6)	42 (23.1)			
No	6 (6.3)	21 (22.1)	54 (56.8)	14 (14.7)			

**Table 4: Predictors of place of perpetrating rape**

VARIABLE	Odds ratio	95% Confidence Interval	P
Relationship with perpetrator			
Known	1	0.200-0.656	0.001
Unknown	0.363		
Age of victim			
<5	1	0.019-16.386	0.947
5-14	1.219	0.083-12.144	0.981
15-24	1.006	0.121-20.354	0.906
25-34	1.570	0.085-21.080	0.730
35-45	1.166		0.917
Level of education			
None	1.940	0.246-15.301	0.498
Primary	1.368	0.165-11.177	0.529
Secondary	1.227	0.153-9.729	0.778
Tertiary	1		0.948

More victims (60.7%) who were less than 5 were raped in the perpetrator's home or office compared to 43.6% of those who were between 15-24 years. Also, 50% of those with tertiary educational qualifications were raped in their homes compared to 10% of those with primary educational qualifications. Rape was carried out in uncompleted building/bush by the perpetrators who were known to the victim prior to occurrence compared to 6.3% of those who the victims did not know prior to the rape. All of these findings were statistically significant ( $P < 0.05$ ).

**Table 4: Predictors of place of perpetrating rape Odds ratio**

There is a higher OR of rape being carried out in the culprit or victim's home among those who are familiar with the perpetrator compared to those who were not familiar with the perpetrator (OR 0.36; CI 0.200–0.656). This finding was statistically significant ( $P$  value).

**Table 5: Determinants of knowledge of rape perpetrator**

More individuals (75%) between the ages of 25–34 years knew their perpetrators before the incidence compared to 53% of those less than 5 years. In addition, over 72% of respondents who knew their perpetrators prior to the incident reported the incident within 3 days of occurrence and this finding was statistically significant. Other variables that were statistically significant were time of occurrence, place of occurrence, and number of perpetrators. However, there was no statistically significant association between educational qualification, tribe, and knowledge of perpetrators.

**Table 6: Predictors of rape being perpetrated by individuals known to the victim**

**Table 5: Determinants of knowledge of rape perpetrator before incidence**

VARIABLE	PERPETRATOR KNOWN	PERPETRATOR UNKNOWN		
		X	df	P
Age		2.292	4	0.686
<5	15 (53.6)	13 (46.4)		
5-14	122 (66.7)	61 (33.3)		
15-24	37 (67.3)	18 (32.7)		
25-34	6 (75.0)	2 (25.0)		
35-45	2 (66.7)	1 (33.3)		
Sex		2.698	1	0.101
Male	43 (59.7)	29 (40.3)		
Female	144 (70.2)	61 (29.8)		
Level of education		4.524	3	0.210
None	87 (65.4)	46 (34.5)		
Primary	51 (60.0)	34 (40.0)		
Secondary	40 (72.7)	15 (27.3)		
Tertiary	4 (100)	0 (0)		
Marital status		1.730	1	0.189
Married	10 (83.3)	2 (16.7)		
Not married	172 (64.9)	93 (35.1)		
Time of report		14.256	3	0.003
≤3 days	134 (72.8)	50 (27.2)		
4-7 days	21 (58.3)	15 (41.7)		
7 days to 1 month	19 (51.4)	18 (48.6)		
>1 month	8 (40.0)	12 (60.0)		
Place of occurrence		15.849	3	0.001
Bush/uncompleted building	37 (86.0)	6 (14.0)		
Victim's house	20 (48.8)	21 (51.2)		
Perpetrator's house/office	83 (60.6)	54 (39.4)		
Others	42 (75.0)	14 (25.0)		
Number of perpetrators		11.430	3	0.008
1 person	145 (61.7)	90 (38.3)		
2-5 persons	28 (84.8)	5 (15.2)		
>5 persons	7 (100)	0 (0)		
Unknown	2 (100)	0 (0)		

**Table 6: Predictors of rape being perpetrated by individuals known to the victim**

VARIABLE	Odds ratio	95% Confidence Interval	P
Tribe			
Hausa/Fulani	1	0.904-3.785	0.413
Tangale/waja	1.850	0.00	0.092
Others	0.00	0.601-3.773	0.999
Non-response	1.506		0.382
Place of occurrence			
Bush/uncompleted building	1	0.228-2.050	0.490
Victim's house	0.684	1.396-8.562	0.007
Perpetrator's house/office	3.457	0.930-4.096	0.076
Others	1.989		
Number of perpetrators			
1 person	1	0.999	967.00
2-5 persons	0.066	0.999	104.22
>5 persons	0.999	1.000	1.000
Unknown	0.999		

The odds of rape occurring by a known person to the victim is 3.4 times more likely in the perpetrator's house/office compared to an uncompleted building or bush. This finding is statistically significant ( $P$ -value 0.007 with a CI of 1.396–8.562). Although other findings were not statistically significant, there are higher odds of rape to be perpetrated

by only one person when known to the victim and 1.8 times more odds of rape to be perpetrated by a known person among Tangale/Waja tribe compared to other tribes.

## Discussion

The age group of the victims in this study is similar to findings in Jos and Enugu.<sup>[11-13]</sup> This could be because younger individuals including children are more vulnerable to rape. In addition, there is a higher likelihood of reporting rape among younger victims.<sup>[11]</sup> The predominance of the particular tribe maybe because it is the major tribe in the study area. Furthermore, the finding on the educational status of the rape victims is similar to the study conducted in Swaziland,<sup>[14]</sup> this could be because of the increased risk of social problems and increased vulnerability of out of school children, who are engaged in child labor thereby increasing their contact with older individuals.

Furthermore, the findings of knowledge of the perpetrators are similar to studies conducted in Germany and Swaziland.<sup>[13,14]</sup> The study also found out that rape was more likely to occur around the perpetrator's office or house, with the victims mostly being familiar with the perpetrators, similar to findings from similar studies.<sup>[12-17]</sup> A plausible explanation for these findings could also be related to the increased vulnerability of out of school children.

## Conclusions

Rape is a common presentation in our setting and affects mostly children irrespective of the sex. Children under the age of 5 years are mostly assaulted in the perpetrator's office or shop while older persons were assaulted mostly in their homes. Those raped in the perpetrator's office did not usually have prior knowledge of the perpetrators compared to those raped at home.

It is recommended that children should be placed in schools to minimize child labor, which increases the likelihood of rape.

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## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient (s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal.

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Nil.

### Conflicts of interest

There are no conflicts of interest.

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