



AN EXPLORATORY STUDY ON VIOLENCE IN A RURAL AREA NEAR BENGALURU, KARNATAKA, INDIA.

Community Medicine

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ABSTRACT

BACKGROUND: In India, there has been an increased reporting of violence over the years and its magnitude varies from state to state. Most of the studies available in India are on violence occurring within the household like domestic/intimate partner violence, child abuse, etc. There are very few studies available on violence that occurs outside the household in the community. Objectives of the study were to assess the burden of violence among people living in a rural area near Bengaluru, to list out the different types, causes and health consequences of violence, to assess the opinion of the subjects on violence and to find out the various factors associated with violence.

METHODS: This exploratory study was conducted in the villages coming under three Primary Health Centres in a rural area near Bengaluru over a period of 3 months in the last quarter of 2016. The study subjects were aged between 14 years to 60 years. The total sample size was 2046. A pretested structured questionnaire was applied anonymously as the survey tool to gather information.

RESULTS: A total of 2046 subjects were surveyed, of whom 159 (7.7%) experienced some kind of violence in the past one year. 54% were males, 32.1% were high school educated, 14.5% had received no formal education, 89.9% were Hindus. The major form of violence was verbal abuse (83.6%), followed by pushing around (12.6%), slapping (10.7%), hitting (9.4%). 5.0% had abrasions, 3.0% had bleeding & pain.

CONCLUSIONS: About 7% of the subjects had experienced violence. Verbal abuse was the most common type of violence. Substance use was significantly associated with violence.

KEYWORDS

Violence, risk factors, verbal abuse, consequence

INTRODUCTION

Violence has probably always been part of the human experience. WHO defines violence as the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation.¹ Violence is emerging as a significant public health problem. Its impact can be seen, in various forms, in all parts of the world. Each year, nearly 1.4 million people worldwide lose their lives to violence and about 3800 people are killed every day. For every person who dies as a result of violence, many more are injured and suffer from a range of physical, sexual, reproductive and mental health problems. Violence places a massive burden on national economies, costing countries huge amounts of monetary expenditures each year in health care, law enforcement and lost productivity.²

In India, there has been an increased reporting of violent events over the years. The National Crime Records Bureau (NCRB), Government of India had reported crime rate of 234.2 per 100,000 population. However, the true picture of the problem is not known as even NCRB data has its limitations.³ Of late, an unfortunate trend is the health care professionals being a target for violence.⁴

Violence can range from one end of spectrum such as verbal abuse to another extreme like homicides. The types of violence reported can vary from mass scale conflicts between religious groups, communities or states to individual or group violence.

The last decade has seen an exponential rise in right wing extremism. The world has become increasingly polarized leading to sectarian violence, religious violence, interstate and intercountry violence. People are reacting in extreme measures for slightest of the provocation.

Most of the studies available in India are on violence occurring within the household like domestic/intimate partner violence, child abuse, etc. There are very few studies available on violence that occurs outside the household in the community which focusses on the societal causes of violence like road rage, fights with neighbours etc. Moreover, in India, firearms are not easily available to the layman and hence the type of violence reported is different when compared to other countries' scenario.

Hence, the present study has been taken up with the following objectives:

1. To assess the burden of violence among people living in a rural area near Bengaluru
2. To list out the different types, causes and health consequences of violence
3. To find out the various factors associated with violence.
4. To assess the opinion of the subjects on violence

METHODS

This exploratory study was conducted in the villages coming under three Primary Health Centres in a rural area near Bengaluru over a period of 3 months in the last quarter of 2016.

The study subjects were aged between 14 years to 60 years. The sample size was calculated based on the pilot study prevalence of 18%. Taking confidence level to be 95% and precision error of 10%, the sample size was 1750. Assuming a non-responders rate of 15%, the total sample size estimated was 2046. All villages from the three Primary Health Centres were line-listed in alphabetical order and 20 villages (under five subcentres i.e. 4 villages covered per subcentre) were selected randomly to give equal representations. 25 households were surveyed through stratified random sampling (every 5th household) in each village to reach the required sample size. The selection of street, direction of survey and first household to be surveyed in each village was done using random number tables. The information was obtained from the head of the household or adult responsible respondent by the trained field investigator. The respondent should have been a resident of the area for a minimum of six months.

The questionnaire was prepared by the investigators, field tested, pilot studied on people with history of violence. The validity of the questionnaire was done by measuring for internal consistency and Cronbach's alpha. The questionnaire was used as the survey tool to gather information after taking informed consent.

Data analysis

The outcome of the study was defined using dichotomous variables such as a) being involved in a physical fight / verbal argument at least once over the past 12 months, b) Whether it was provoked or unprovoked? c) Did it involve any weapon/object? d) Did they sustain any physical injury? e) Did they require any medical assistance for the injury sustained? Violence that had occurred within the household/family members was excluded. The institutional ethics committee clearance was taken for conduct of the study. Confidentiality of the information was maintained at all stages.

Initially, associations of violent behaviour were assessed with socio-demographic characteristics. Subsequently, the subset of variables identified as significant were entered as covariates into a series of logistic models, examining the association of violent behaviour with each of the risk behaviours. Multivariate logistic regression technique was used to examine the net effect of each explanatory variable on violent behaviour. Unadjusted and adjusted odds ratios (ORs) and their corresponding 95% confidence intervals (CIs) were calculated. All analyses were performed using MS Office 2016 and Stata version 12.1, Texas, USA. A P-value, less than 0.05 was considered statistically significant.

Operational case definitions:

Outdoor violence: Violence occurring outside home/ place of residence.

Provoked violence: Violence occurring due to a stimulus or trigger.

RESULTS

A total of 2046 subjects were surveyed, of whom 159(7.7%) experienced some kind of violence in the past one year. 86 (54%) were males, 51 (32.1%) were high school educated and 23 (14.5%) had received no formal education. 143(89.9%) were Hindus and 16 (10.1%) were Muslims by religion. 37.7% were semi-skilled workers followed by 29% & 21.4% unskilled workers and homemakers respectively. The income of subjects ranged from Rs.500 to Rs.1,00,000 per month with the median income being Rs. 8,000 per month. 45.2% subjects belonged to Class II socio-economic status.⁵ 75.5% subjects were married, 74.2% subjects belonged to a nuclear family.

The median age of subjects with inter quartile range was 28 (26, 43 years) and age range of subjects was from 14yrs to 85yrs. The subjects in the age group of 14-24years reported the highest burden of violence as depicted in table-1, compared to those aged 55yrs and above. 4 (2.5%) subjects were aged above 60 years. 89 (55.9%) subjects had experienced multiple episodes of violence. There was no statistically significant association between gender, religion, education, family income per month, socio economic status, occupation and violence by univariate logistic regression analysis.

About 50 (31.4%) subjects gave history of using at least one substance of abuse. In 24.5% subjects, cigarette/beedi smoking was the main substance of abuse followed by alcohol consumption (12.6%). Subjects who used substance were at more risk of committing violence compared to those who did not use (OR- 2.6; CI: 1.34-4.87).

The variables that were statistically significant during univariate logistic regression analysis were included in the multivariate logistic regression model as depicted in Table-I. Violence was the dependent variable. Age, type of family and substance use were found to be significant. The major type of violence was verbal abuse (83.6%), followed by pushing around (12.6%), slapping (10.7%), hitting (9.4%), punching & pulling hair (3.1%), bullying & kicking (1.3%) and poisoning (0.6%). Common causes of violence were fight with neighbours, road rage, under the influence of alcohol & family dispute as depicted in Table-II. 89.3% of the violent episodes had started after provocation. There was no statistically significant association between number of episodes of violence and age group.

When we looked at the physical consequences of violence, 88.7% did not experience any physical injuries, 5.0% had abrasions, 3.0% had bleeding & pain each and 0.6% had convulsions and laceration each. There was one death reported due to violence because of personal rivalry. The emotional and mental consequences of violence were 38.3% subjects felt angry after an episode of violence, 27.0% felt depressed, 5.6% were satisfied, 3.1% were scared, 1.8% felt like taking revenge and 1.2% felt anxious. 47.8% subjects felt their violent reaction was justified. However, there was no statistically significant association between type of violence and consequences of violence on applying multinomial logistic regression. Majority of the study subjects did not feel any change in the societal behaviour towards them after an episode of violence as depicted in table-II.

Based on part of the body involved, 3.8% injuries were on hands & head each, 2.0% on legs, 1.9% over chest, 1.0% over trunk and back each. 06 (3.7%) required medical assistance and only 01 (0.6%) subject required inpatient care. Average money spent for treatment was

Rs.500. 62.9% subjects felt their violent reaction was a form of self-defence, 14% felt it was due to their ego, 9.6% said it was because of their personality, 6.6% & 5.93% said it was to protect their honour and family pride respectively. A sample of 400 adult responsible respondents were asked about their opinion on violence, 73% subjects opined becoming violent was not the right way to solve a problem. 63(15.7%) felt that violence is increasing in the society day by day, of whom, 8 (12.7%) subjects said monetary issues were the main reason for increase in the violence, followed by 11.1% due to selfishness/greed and 9.6% said it was due to alcohol consumption. 29.7% subjects opined violence can be reduced by imparting education, 6.5% said by avoiding alcohol, 7.4% by discussions and 4.9% by ensuing strict police laws. 47.8% were of the opinion that there was no requirement for violence reduction strategies. 11.78% subjects had mentioned that they had seen a victim of violence in past 1 year, out of which 3.73% were fatal in outcome.

DISCUSSION

Burden of violence:

The study findings showed the burden of violence was high when compared to national average, however very much different when we looked at the specific cause of violence. The distribution was equal with slight male preponderance contrary to the assumption that women are mainly affected. The age group affected the most was similar to those mentioned in the WHO country reports.² There was not much difference among religious lines. Nuclear family and substance use did matter on who was affected due to violence.

The proportion of women who had ever suffered physical violence by a male partner ranged from 13% in Japan to 61% in provincial Peru. The WHO study found that higher education was associated with less violence in many settings.⁶ Studies reveal that firearm conflicts are differentially associated with substance use and violence motivations.^{7,8} The only available global estimate shows that 6% of older adults reported significant abuse. Health workers are at high risk of violence all over the world. Between 8% and 38% of health workers suffer physical violence at some point in their careers. Many more are threatened or exposed to verbal aggression. Most violence is perpetrated by patients and visitors.⁹

Though an expanding population has advantages, it can also lead to situations where people are competing for limited resources. Coupled with bad governance, corruption, scant respect for rule of the law, deeply held cultural practices and male dominated society are ideal recipes for violence. Structural violence, is a form of violence wherein some social structure/ institution may harm people by preventing them from meeting their basic needs.^{10,11,12} Focusing merely on those relatively few persons who commit violence is not sufficient. Examining and learning from those structural causes of violence is important, that are far more significant from a numerical or public health or human standpoint.^{13,14}

Violence is often predictable and preventable.¹⁵ Proven and promising violence prevention strategies focused on life skills training and social development programmes for children aged 6-18 years and assisting high-risk adolescents and young adults to complete schooling and pursue courses of higher education and vocational training. Promoting positive, nurturing relationships within families can prevent violence. Societies can prevent violence by reducing risks such as alcohol, guns, economic and gender inequality.² The health sector can play a vital role in preventing violence against women, helping to identify abuse early, providing victims with the necessary treatment, and referring women to appropriate care.⁶ lost a significant amount of money to violence in 2016.¹⁶

Type of violence:

Verbal abuse was the most predominant type of violence seen in the current study. Maybe the rural population was the reason. Large scale violence due to armed conflicts, religious or caste based was non-existent in the present study. The different categories of violence as reported by WHO are interpersonal violence, suicide and self-harm and collective violence.¹

Fight with neighbours, under the influence of alcohol and road rage were the major causes of violence. A few percentage of the subjects had seen a victim of violence including fatal ones. The type of violence reported from the rural population may differ from the urban

population. There is large scale migration of people to cities across India and this may lead to local versus outsider related violence. The authorities need to address this issue carefully so as to ensure good acculturation and inclusion.

There was one death reported in the study. Homicide is the third leading cause of death globally for men aged 15-44, highlighting the urgent need for more decisive action to prevent violence. An estimated 475,000 people worldwide were victims of homicide, for an overall rate of 6.7 per 100,000 population. Males account for 82% of all homicide victims. Majority of the country reports (88%) on homicide were from police sources.¹ 4.3 per 100,000 is the estimated rate of homicide in India, the ratio is low for the population compared to other countries with smaller populations and higher rates.² The types of violence witnessed in the other parts of the country was different than those observed in the present study.¹⁶⁻¹⁹

Consequences of violence:

The consequence of violence reported in the study was predominantly non-injurious and non-fatal. Unintentional injuries and violence contribute to the leading causes of death and disability among youth and adults.²⁰ The health impact of violence is not limited to physical injury. Long-term effects can include depression, mental disorders, suicide attempts, chronic pain syndromes, unwanted pregnancy, HIV/AIDS and other sexually transmitted infections. Children who are victims of violence have a higher risk of alcohol and drug misuse,

smoking, and high-risk sexual behaviour.²¹ Exposure to violence and openness to experience often leads to aggressive behaviour.²²

Strengths of the study: The study is an eye opener as there are hardly any information on violence from rural areas of India. The study also throws light on the type of violence, cause of violence, parts of body involved, consequences of violence in terms of physical, mental and social well-being and lastly on what people think about the problem.

Limitations: The details of cause of violence, type of violence, consequence of violence are based on the history given by the subjects and are assumed to be true.

Conclusion: Violence was observed in about 7% of the subjects. Verbal abuse was the most common form and substance use was significantly associated with violence.

Future directions of the study: A larger study covering a wider geographic area is needed for generalization of results. There is a need to introduce violence reduction strategies in the country.

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Competing interests: None declared

Ethical Approval: Approval was taken from the Institutional Ethics Committee.

Table I: Distribution of subjects according to association between individual variables and Violence using Multivariate logistic regression:

	Males (n=86)	Females (n=73)	Total (n=159)	Odds Ratio [95% CI]	Standard Error	Z	P value
Age group (in years)							
14-24	38(44.2)	18(24.6)	56(35.2)	13.32 [03.92,45.26]	08.31	4.15	0.000*
25-34	20(23.2)	28(38.4)	48 (30.2)	6.22 [01.71, 22.54]	04.08	2.79	0.005*
35-44	13(15.2)	14(19.2)	27 (17.0)	4.54 [01.28, 16.06]	02.92	2.35	0.019*
45-54	10(11.6)	09(12.3)	19 (11.9)	3.36 [01.13, 10.00]	01.87	2.18	0.029*
>55	05(05.8)	04(05.5)	9 (05.7)	1.00			
Type of family							
Nuclear	65(75.6)	52(71.2)	117(73.6)	1.00			
Joint	11 (12.8)	11(15.1)	22 (13.8)	00.88 [00.36, 02.18]	00.41	-00.27	0.789
Three generation	10 (11.6)	10(13.7)	20 (12.6)	00.43 [00.18, 01.05]	00.19	-01.85	0.065
Substance Use							
Absent	42(48.8)	67(91.8)	109(68.5)	1.00			
Present	44 (51.2)	6 (8.2)	50 (31.5)	02.56 [01.34, 04.87]	00.84	02.86	0.004*

Figures in parenthesis indicate percentages

CI- Confidence Interval

*Significant associations, P<0.05

Table –II: Distribution of subjects based on cause and social consequences of violence:

Causes	Number*(n=159)
Argument with neighbours	46 (28.9)
Road rage	35 (22.0)
Under the influence of Alcohol	28 (17.6)
Family dispute	24 (15.1)
Monetary issues	20 (12.6)
Argument in public transport (Bus/Train/Hospitals)	05 (3.2)
Argument with customers	03 (1.9)
Personal rivalry	03 (1.9)
Argument at work place	02 (1.3)
Argument with parents	01 (0.6)
Misunderstanding with friends	01 (0.6)
Fight at a hospital	01 (0.6)

Social consequences	Number (n=159)
Looked down	12 (7.5)
More accepted	10 (6.3)
Outcast	06 (3.8)
Anti-social	01 (0.6)
No consequence	130 (81.8)

*Multiple response question

Figures in parenthesis indicate percentages.

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