

## Prevalence of Elder Abuse in an Urban Slum in North India: A Cross-Sectional Study

Rahul Gupta<sup>1</sup>, Saranya Rajavel<sup>1</sup>, Tarundeepr Singh<sup>1\*</sup>, Shubh Mohan Singh<sup>2</sup>

<sup>1</sup>Department of Community Medicine and School of Public Health, Postgraduate Institute of Medical Education and Research, Chandigarh, India

<sup>2</sup>Department of Psychiatry, Postgraduate Institute of Medical Education and Research, Chandigarh, India

**\*Corresponding author:** Tarundeepr Singh, Department of Community Medicine and School of Public Health, Postgraduate Institute of Medical Education and Research, Chandigarh, India

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### Abstract

Elder abuse is a single or repeated act or lack of appropriate action, occurring within any relationship where there is an expectation of trust which causes harm or distress to an older person. The abuse can be in the form of verbal, psychological, physical, financial, neglect or sexual that can lead to serious physical injuries and long-term psychological consequences. The objective of the study was to estimate the prevalence of vulnerability of the elderly to abuse during the COVID-19 pandemic in an urban slum which is the field practice area of Post Graduate Institute of Medical Education and Research (PGIMER) Chandigarh. It was an observational, analytical cross-sectional study in which the participants of age >60 years were interviewed using Vulnerability to Abuse Screening Scale (VASS). A score of more than 4 indicated presence of abuse. A p-value of less than 0.05 was considered statistically significant. We interviewed 206 participants. The median age was 67 (IQR=10) years and 65% of them were males. While 12.1 % lived alone, 23.8% of them were living away from the family. The prevalence of elderly abuse was 13.1% in our study population that was significantly associated with female gender, illiteracy, having at least diabetes mellitus or hypertension, and living alone or living away from the family. It is recommended that the elderly should be treated with utmost care and love especially during the pandemic time when they are more vulnerable to abuse.

**Keywords:** Abuse; COVID-19; Elder; Slum; VASS

### Introduction

The vulnerability to being abused among the elderly is one of the most critical issues in the geriatric health because of its long-term consequences [1]. One in six people 60 years of age and older experience some form of abuse in community settings. According to the World Health Organization, "Elder abuse is a single or repeated act or lack of appropriate action, occurring within any relationship where there is an expectation of trust which causes harm or distress to an older person" [2]. The abuse can be in the form of verbal, psychological, physical, financial, neglect or sexual. It can lead to serious physical injuries and long-term psychological consequences [3]. The lack of formal education among older people in India further complicates the situation [4]. Decreased functional ability and consequent dependence on others is also a contributing factor for elderly abuse. After the age of 60, people get retired from their active work and spend time socialising with

other senior citizens. But due to COVID-19, physical distancing and ban on social gatherings have deprived elderly of these interactions which make them prone to mood and anxiety issues [5]. They are not able to share their worries with friends/relatives, thus a feeling of loneliness seems to surface. Also, older people have limited knowledge and access to technology which has now become a requirement for availing essential services during this pandemic and that adds a layer to an already existing problem of elderly abuse [6]. Although any elderly person can become a victim of abuse but those who are dependent on others for daily activities like bathing, dressing and taking medicines are more commonly affected. Studies have suggested that the family members are more likely to be involved in home abuse and neglect. Elderly may feel less ashamed about reporting abuse by professional care givers as compared to the related family members, thus resulting in an under reporting of abuse by their own family members [7]. In addition, such people require more care and time of their loved ones to improve their quality of life.

The situation of alarm generated by Covid-19 has turned into a crisis with unprecedented implications throughout the world [8]. The loss of jobs due to the pandemic on one hand while the poor social security measures in Lower Middle-Income Countries (LMIC) including India itself has not only adversely affected the nation's economy at macro level, but it has also proven to be an anathema at the micro level too. Older adults are the segment of the population most vulnerable in this pandemic, largely due to their financial insecurity, weaker immune systems and higher likelihood of having a chronic condition such as heart disease, diabetes, lung disease and cancer, thus leading to social isolation [9]. The fear of being unable to be sustained financially has also made an impact on the mental health of the people.

This study was conducted to estimate the prevalence of vulnerability of the elderly to abuse during the COVID 19 pandemic time in an urban slum and to identify the factors associated with vulnerability to elder abuse.

## Methodology

This observational study was conducted (August to October 2020) in an urban slum which is also the field practice area of department of Community Medicine and School of Public health, Postgraduate Institute of Medical Education and Research, Chandigarh, India. There are nearly 5,000 households which comprises a population of nearly 24,000 people, of which the number of elderly persons, aged above 60 years, is approximately 4000. Primary health care needs of the population are catered to by the dispensary being run by the department in conjunction with the health Services of Chandigarh.

Taking an estimated prevalence of elderly abuse to be 15% from a previous study, and assuming precision of 5% and power of 80%, the estimated sample size was 187. Further assuming a 10% non-response rate the final required sample size was 206. From a list of all persons above the age of 60 years, potential participants were selected using a computer-generated random number list. Contact was made through phone. Attempt to connect was made twice before calling the next number on list.

A semi structured validate questionnaire was use to collect data on demographic and socio-economic variables. Additionally,

Vulnerability to Abuse Screening Scale (VASS), was used to collect data on vulnerability to abuse [10]. VASS comprises of 12 items, with "yes" and "no" responses, which evaluate emotional, psychological, and verbal abuse in the hand of family members. VASS total score of >4 was considered as an indicator of presence of abuse [11-15].

Data was tested for normalcy using Kolmogorov-Smirnov normality test ( $p<0.001$ ) and there was a strong evidence against the normalcy of the data. We describe the quantitative variables as median and inter-quartile range for non-normally distributed data, whereas qualitative variables were expressed as frequencies and proportions and chi square test was used. A p-value of less than 0.05 was considered as statistically significant. The data was analysed using SPSS software version 24.0 [16-20].

Approval for the study was granted by the Institutional Ethics Committee, of the Postgraduate Institute of Medical Education and Research, Chandigarh, India

There was no funding for the study.

## Results

The recruiting process stopped when the sample size was achieved. The demographic characteristics of the participants are presented in Table 1. The median age of the study participants was 67 (Interquartile range: 10) years, ranging from 60 years through 97 years. Approximately two-third of the study participants were males (65%), three-fifth of the participants were married (60.7%) and nearly half of the participants were living in a joint family (51%). A majority of the participants were illiterate (35%) while nearly 28% and 29% of them had attended up to middle-school and primary-school respectively. Almost 60% of the participants had some kind of jobs as either skilled, semi-skilled or unskilled workers while the rest were unemployed, retired or home-makers. Overall, 75% of the study participants had some kind of comorbidity, 31.1% participants had hypertension alone, 25.7% had type two diabetes mellitus, 18.9% of the participants had both hypertension and diabetes mellitus, and the rest (24.3%) had no comorbidity. About 12% of the study participants were living alone, almost one-fourth of the participants were living away from the family.

Variables	Frequency	Proportion (%)
<b>Age (Median ± IQR)</b>	<b>67.0 ± 10</b>	
60-65	75	36.4
66-70	51	24.8
71-75	40	19.4
76-80	24	11.6
80+	16	7.8
<b>Range of age</b>	<b>60-97</b>	

<b>Gender</b>		
Female	72	35.0
Male	134	65.0
<b>Marital Status</b>		
Married	125	60.7
Widow	59	28.6
Single	9	4.4
Separated	8	3.9
Divorced	5	2.4
<b>Type of Family</b>		
Extended	29	14.0
Joint	105	51.0
Nuclear	72	35.0
<b>Education</b>		
Illiterate	72	35.0
Up to Middle School	58	28.2
Up to Primary School	59	28.6
Higher	17	8.2
<b>Occupation</b>		
Unemployed	30	14.5
Unskilled Worker	50	24.3
Semi-Skilled Worker	64	31.1
Skilled Worker	10	4.9
Retired	22	10.7
Home Maker	30	14.5
<b>Comorbidity</b>		
Hypertension alone	64	31.1
Diabetes Mellitus alone	53	25.7
Both	39	18.9
None	50	24.3
<b>Living Alone</b>	25	12.1
<b>Living away from family</b>	49	23.8

**Table 1:** Demographic profile of the study participants (N=206).

Table 2 illustrates the score obtained from VASS scale that was used to assess the vulnerability to abuse, among the study participants. The proportion of participants who had scored more than four on the VASS tool was found to be 13.1%.

	Frequency	Proportion (%)
<b>VASS Score</b>		
≤4	179	86.9
>4	27	13.1

**Table 2:** Abuse and Loneliness scores of the study participants (N=206).

We also tried to find an association between loneliness and different variables that were included in our study. The vulnerability to abuse was not significantly associated with age, marital status and occupation of the study participants (p values: 0.837, 0.064, and 0.461 respectively). There was strong evidence that males were less vulnerable to abuse as compared to females (OR=0.374; p=0.016) and the odds of vulnerability to abuse among the participants living in non-nuclear families was 0.26 times that of those living in nuclear families (p=0.001). Those who had attained some form of formal education in their life time had significantly less chance of being vulnerable to abuse as compared to illiterate participants (p=0.001). The participants who were either suffering from some kind of comorbidity had greater odds of being vulnerable to abuse (p=0.028) as well as those who were living alone (p<0.001), and away from family (p=0.001) were also found to be vulnerable to being abused (Table 3).

	Vulnerability to abuse				
	Absent n(%)	Present n(%)	Chi Square	p-Value	Odds Ratio (95%CI)
<b>Age Group</b>					
≤70	109 (60.9)	17 (63.0)	0.042	0.837	Reference
>70	70 (39.1)	10 (37.0)			0.916 (0.397-2.115)
<b>Gender</b>					
Female	57 (31.8)	15 (55.6)	5.802	<b>0.016</b>	Reference
Male	122 (68.2)	12 (44.4)			0.374 (0.164-0.850)
<b>Marital Status</b>					
Single/Divorced/Separated	66 (36.9)	15 (55.6)	3.343	0.064	Reference
Married	113 (63.1)	12 (44.4)			0.467 (0.206-1.058)
<b>Type of Family</b>					
Nuclear	55 (30.7)	17 (63.0)	10.724	<b>0.001</b>	Reference
Non-Nuclear	124 (69.3)	10 (37.0)			0.262 (0.112-0.606)
<b>Education</b>					
Illiterate	55 (30.7)	17 (63.0)	10.724	<b>0.001</b>	Reference
Non-Illiterate	124 (69.3)	10 (37.0)			0.261 (0.112-0.606)
<b>Occupation</b>					
Unemployed	73 (40.8)	9 (33.3)	0.543	0.461	Reference
Employed	106 (59.2)	18 (66.7)			1.377 (0.586-3.235)
<b>Comorbidity</b>					
None	48 (26.8)	2 (7.4)	4.808	<b>0.028</b>	Reference
At least one comorbidity	131 (73.2)	25 (96.2)			4.580 (1.045-20.075)

<b>Living Alone</b>					
No	164 (91.6)	17 (63.0)	18.069	<b>&lt;0.001</b>	Reference
Yes	15 (8.4)	10 (37.0)			6.431 (2.504-16.517)
<b>Living away from family</b>					
No	143 (79.9)	14 (51.9)	10.173	<b>0.001</b>	Reference
Yes	36 (20.1)	13 (48.1)			3.688 (1.594-8.533)

**Table 3:** Association of abuse with various variables amongst the elderly (N=206).

## Discussion

In our study, the prevalence of elder abuse was found to be 13.1% and there was weak evidence that association between vulnerability to abuse in our study population and age group, marital status and occupational status of the participants. Male gender, non-nuclear family (either joint or extended), formal education was protective against elderly abuse, having at least one comorbid condition, either living alone or away from the family were found to be significant risk factors that contributed towards being vulnerable to abuse.

In our study, sixty-two percent of total study participants belonged to age group of 60–70 years and median age is 67 years. This finding is very much similar to the study conducted by Pritish K, et al. in urban settlement colony of Delhi where author recruited 125 elderly participants [1]. In this study, majority of the participants were males, but this gender distribution is not similar in the study conducted by Pritish K, et al. in Delhi and Ramalingam A, et al. [1] where 243 elderly individuals studied in which 63% were women.

In present study, more than fifty percent participants were married and were living in joint families. More than one third of the study participants were illiterate but higher level of illiteracy among elderly has been reported by Pritish K, et al. It was found that about 12% of the study participants were living alone and almost one-fourth of the participants were living away from the family. The pattern of living arrangement is almost similar in a study conducted by Pritish K, et al in urban settlement of Delhi.

Almost two third of the study participants in present study living with co-morbidities such as hypertension, Diabetes Mellitus, which was similar to the 60% reported among older adults aged  $\geq 60$  years among 9852 older adults from seven selected Indian states [2].

We found a prevalence of vulnerability to abuse to be 13.1% in our study sample, which was high compared to a prevalence of 9.6% in urban resettlement colony in Delhi. Other studies done in India found a prevalence of elderly abuse between 9% and 50% [2]. Skirbekk, et al. conducted a similar study in which they found a prevalence of current abuse to be 6% while the prevalence of ever abuse was found to be 11% which falls in line

with our study. A meta-analysis of 52 studies from 28 countries of diverse region including 12 low- and middle-income countries showed the prevalence of some form of elder abuse to be 15.7% in a community setting which is almost similar with present study [4]. The data released by World Health Organisation (WHO) on world elder abuse awareness day in June 2020 revealed that prevalence of elder abuse likely to increase from 15% in the times of pandemic [3].

In our study, the prevalence of abuse is present in all elderly age groups which is contrary to the study conducted by Gaikwad, et al. [16] in rural area of Karnataka among 127 elderly persons in a community where abuse was found more in the age group of 65–70 years and in  $> 75$  years of age group and also in a study conducted by Pritish, et al. in urban resettlement colony of Delhi where abuse was more common in higher age group, that is,  $> 70$  years.

In present study, prevalence of abuse was found to be significantly higher among females compared to male participants. Similar results were found in a study conducted in rural Puducherry where women had significantly higher prevalence of abuse (70.3%) compared with men (47.1%) and also in a study conducted by Gaikwad, et al. in rural areas of Karnataka [16].

Elderly with a no formal education had a significantly higher prevalence of abuse (63.0%) compared to participants who was literate. Similar association was found in Ramalingam A, et al. study [12]. In our study, employment was not found to be a risk factor for elder. Employment would mean a higher per capita income of the family. Because financial worries are lesser in such households, the elderly may not be perceived as an additional burden, and this may be the reason for the lower prevalence of abuse. Available literature supports our finding that family structures are undergoing major changes out for better prospective of job which could lead to malalignment of the relationships between the elderly and their care-givers [2,3].

The study participants who were living alone had significantly higher prevalence of abuse (63%), which is comparable with the study conducted by Ramalingam, et al. in rural Puducherry (60%). The study done in Kerala showed that the prevalence of abuse among the elderly who live alone was higher than those who lived with their children or relatives in the same house [2].

There was weak evidence that was suggestive of any significant association between vulnerability to abuse in our study population and age group, marital status and occupational status of the participants. Some of the existing literature does not support our findings and suggests there is a significant association between chronological age, marital status, occupation and elderly abuse [2]. We, however, found that gender, type of family, education, comorbidity, living alone, and living away from the family were important factors that were associated with elderly abuse. While male gender, non-nuclear family (either joint or extended), formal education was protective against elderly abuse, having at least one comorbid condition, either living alone or away from the family were found to be significant risk factors that contributed towards being vulnerable to abuse.

## Conclusion

Prevalence of abuse was found to be 13.1% in our study population. There was weak evidence that was suggestive of any significant association between vulnerability to abuse in our study population and age group, marital status and occupational status of the participants. Male gender, non-nuclear family, formal education was protective against elderly abuse, having at least one comorbid condition, either living alone or away from the family were found to be significant risk factors that contributed towards being vulnerable to abuse. Based on our findings, we conclude that the elderly is highly susceptible to abuse and most likely to feel lonely especially when they have been socially isolated during this time of pandemic. Hence, we strongly recommend that they should be treated with utmost care and love especially during the pandemic time when they are more vulnerable to abuse.

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