ORIGINAL RESEARCH ARTICLE

Elder Abuse and Its Association with Mental Well-Being and the Associated Socio-Demographic Factors - A Community Based Cross-Sectional Study in Bengaluru, India

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A B S T R A C T

Background: Elderly abuse in form of neglect and disrespect has been an important risk factor affecting the mental well-being of elderly. This study estimated prevalence of elderly abuse, its association with their mental well-being and associated sociodemographic factors.

Aims/Objectives: To determine the prevalence of the Elderly abuse in the Study area and to find the association of elderly abuse with mental well-being and sociodemographic factors

Methodology: A cross-sectional study was conducted among 355 elderly persons in the field practice area of Vydehi Institute of Medical Sciences and Research Centre, Bengaluru from January 2020 to June 2021. The data was summarized as frequencies, proportions and association using regression.

Results: The prevalence of elderly abuse was 18.3%. Abuse in elderly participants was associated with poor mental well-being, Odds Ratio (OR) 4.56 (95%CI,2.05-10.16) and among elderly with Risk of depression with AOR 5.72(95%CI,3.09-10.59). Abuse in all forms was significantly associated with poor mental well-being (p <0.001), presence of skeletal deformity and lack of physical activity (less than 30 minutes).

Conclusions: The prevalence of elderly abuse is 18.3% in the study area and it is associated with poor mental well-being, higher risk of depression, and lack of physical activity.

Key-words: Elder abuse, Mental well-being, Sociodemographic factors

INTRODUCTION

The elderly population is estimated to reach 13.1% of the total population in India by 2030.[1] Challenges of physical and psychosocial nature are associated with the ageing. It leads to a higher dependency on caregivers and power struggle. Elderly abuse is a consequence of widened intergenerational ties, ageism, social isolation.[2] The changing needs of the younger generations are discordant with that of older person's needs sometimes pushing them to isolation and insecurity.[3,4]

World Health Organization describes elder abuse as a single or repeated act where there is a lack of appropriate action and that occurs within a relationship where there is an expectation of trust that causes harm or distress to the older person.[3] Elderly abuse leads to higher morbidity, reduced quality of life and survival.[2] People usually responsible for perpetuating abuse are the closest family members where trust is broken often impacting them mentally.[4]

Gross underreporting of elderly abuse is a reality. Globally, 15.7% of the older population in community settings undergo abuse annually.[5] The different categories of abuse are physical, verbal, economic, psychological, neglect, and sexual. Psychological abuse has the highest prevalence of 11.6%.[4] LASI study (Longitudinal Ageing study of India) showed that at least 5% of people (60 years or more) were abused annually. The highest abuse was reported in Bihar (11.7%), Karnataka (10.1%) and West Bengal (7.6%).[6]

Functional dependence was a major cause of elder abuse.[6] Disability and limiting conditions led to reduced healthcare utilization, lesser social interaction, and poor mental well-being.[6] The limitation arose from the need for physical dependency.[6] Financial dependence led to exploitation of finances by perpetrators of their funds and assets. Elderly either never reported or delayed reporting fearing hostile retaliation. It leads to increased psychological stress.[7] The risk of developing depression and anxiety also increases. One of the factors found to be inversely associated was the level of schooling.[8]

The occurrence of elder abuse is intertwined intricately with compromised mental well-being and is frequently overlooked or unreported.[9,10,11] It is estimated that approximately 15% of the elderly population experiences mental disorders, further highlighting the significance of this issue.[10]

Unfortunately, there is a scarcity of evidence available, which hampers the timely societal response to address elder abuse effectively.[8,12] Therefore, the present study examined the relationship of elderly abuse with sociodemographic factors and its association with their mental well-being in a rural setting.

The study was conducted with objectives to determine the prevalence of the Elderly abuse in the Study area and to find the association of elderly abuse with mental well-being and sociodemographic factors

METHODOLOGY

Study design and participants: It was a cross-sectional community-based study on 355 participants among elderly in a rural area using a multistage sampling method. **Stage 1**: From the four subcentres under the CHC (Community Health Centre) (where Rural Health Training Centre was situated), two subcentres were selected by lottery method. **Stage 2**: All the twelve villages in the two selected subcentres were enlisted. Nine villages were selected because the other three villages were industrial areas that had predominantly migratory population. **Stage 3**: In the nine villages, using Population proportionate to size sampling technique (Annexure 1), participants were included by continuous enumeration method till required number was met.

Participants aged 60 years and above residing in study areas for not less than six months were included in the study and those who were not present in their homes during three home visits were excluded from the study. The study duration extended from January 2020 to June 2021. Sample size was calculated based on an Indian study where prevalence of psychological distress among abused individuals was found to be 61.6% .[9] It was estimated using the formula: $n = \frac{Z(1-\alpha/2)^2 pq}{d^2}$ where, (Z{1-α/2}, standard normal deviate Data was collected through a semi-structured validated questionnaire where at 95% confidence level; L, 5% relative error; P, prevalence; Q = 100 – prevalence) .

Outcome variable: The outcome variable was elderly abuse based on Elderly survey questionnaire of UNFPA [10]. Questions elicited the presence of perceived abuse they underwent. Physical abuse included any physical harm. Verbal abuse included intimidation or humiliation. Economic abuse included abuse of money, property or assets without consent. Neglect indicated lack of care and disrespect represented lack of consideration and denying recognition.

Independent variables: Information on sociodemographic factors were obtained using Uday Pareek scale[13]. It had nine categories namely Caste, Occupation, Education, Land holding, Farm power, social participation, Type of Family, Type of House and Materials of possession. For measuring risk of depression, *The Short form of Geriatric Depression* Scale (GDS)[14] was used. For assessing psychological well-being, WHO(FIVE) well-being questionnaire was used for analysing mental well-being along with short GDS scale among the study participants.[14,15] The participants were segregated into poor and good categories for WHO(FIVE)scores where Mental well-being scores of less than 52 were taken as poor while those with scores above 52 were considered to have

good mental well-being. Elderly Cognitive assessment Questionnaire (ECAQ) was utilized for measuring Cognition, Orientation and Memory.[16] In ECAQ, a subject without any changes in memory, orientation and cognition scored above 7 where highest score was 10. A subject scoring less than 7 indicated a problem of cognition, memory and orientation. Other variables included were self-rated health where a Five-scale Likert scale with categories of poor, fair, good, very good and excellent was employed. The Katz Index of Independence in Activities of Daily Living (ADL)[17] for basic and essential daily activities employs questions on their ability to perform bathing, dressing, toileting, transferring, continence and feeding were included. The score of 1 depicted no abnormality, 2 was given for partial assistance and 3 for requirement of assistance. Under Lawton Instrumental Activities of Daily Living (IADL) scales for instrumental daily activities[18] those who were without any abnormality or requiring partial assistance were given a score of 1 and those requiring Full assistance were given a score of 0. The subjects scoring less than 8 were considered to have limited ability to perform instrumental activities of daily living. The categories included were ability to use telephone, shopping, food preparation, housekeeping, laundry, mode of transportation, responsibility of own medication and the ability to handle finances. Assessment of mobility and risk of fall were measured using Timed up and Go test (TUG)[19] Elderly taking time above 12 seconds were considered to have a higher risk of fall.

Ethical considerations: The ethical approval for the study was obtained from Institutional Ethics Committee (IEC number ECR/747/Inst/KA/2015/RR-18). Written informed consent was obtained and anonymity of participants was maintained throughout the study period.

Data Analysis: Data was presented in form of frequencies and percentages. Continuous variables were presented as means and standard deviation and means were compared using independent t test. Bivariate analysis and multiple logistic regression analysis were used to measure the association. Analysis of the association of individual type of abuse and the effects on mental well-being was performed using Fisher's exact test. P-value of < 0.05 was considered statistically significant.

RESULTS

Sociodemographic factors were compared with elderly abuse. The participants' distribution as per age and gender showed that the total number of elderlies who were abused were 65 (18.3%) out of 355 participants. The majority, 38(58.46%), who underwent abuse belonged to the 60-69 years category. Table 1 shows the comparison of mean scores of continuous variables among the abused and not abused. It was evident that the mean age for elderly who were abused, was 69.08 ± 7.6(SD) which was higher than those who were not abused. There was no significant difference between the means for scores of cognitions among the abused and not abused participants. Significant difference of scores for GDS was found between abused and not abused participants indicating a possible association between abuse and risk of depression(p<0.001). The mean scores for instrumental activities of daily living were significantly higher for those not abused than the abused elderly (p<0.04) showing that abused were able to perform only limited activities in comparison. The time taken in TUG test by the elderly who were abused was higher compared to those who were not abused (p<0.005) indicating an association between risk of fall and elderly abuse.

Table 2 summarized the association between the elderly abuse and the dependent factors using Bivariate analysis. The elderly abuse had higher odds for those who rated their health lower on the self-rated health scale, were widowed / widower OR 1.81 (95% CI, 1.03-3.19); those who had no land ownership OR 2.36 (95%CI, 1.29-4.33); those who felt that they were not important OR 5.65 (95% CI, 1.51-21.06), or somewhat important OR 2.88 (95% CI, 1.58-5.26) in their families, those who did not exercise OR 2.95 (95% CI, 1.45-5.98); showed physical disability risk (ADL status) had poor mental well-being OR 4.56 (95%CI, 2.05-10.16), and those who had a high risk of depression OR 5.72 (95% CI, 3.09-10.59) and in persons with skeletal deformities OR 5.5 (95% CI, 2.5-12.3).

Table 1: Comparison of Means between Those who were abused and not abused using independent t test (N=355)

Variables	Elderly with abuse (n=65)		Elderly without abuse (n=290)		t test	P value
	Mean ± SD	SE	Mean ± SD	SE		
Age	69.08 ± 7.66	0.95	67.19 ± 6.67	0.392	2.001	0.057
ECAQ score	6.92 ± 1.51	0.188	7.35 ± 1.55	0.091	-2.003	0.597
GDS score	4.11 ± 3.19	0.395	2.24 ± 2.16	0.127	5.72	<0.001
WHO-FIVE well-being score	15.97 ± 3.58	0.443	18.83 ± 3.59	0.211	-5.803	0.62
TUG time score	13.82 ± 10.84	1.345	11.98 ± 2.37	0.139	2.62	0.005
IADL score	5.66 ± 1.73	0.214	6.04 ± 1.53	0.09	-1.769	0.049
ADL score	6.22 ± 0.78	0.097	6.17 ± 0.82	0.048	0.462	0.454

ECAQ-Elderly cognitive assessment questionnaire, GDS-Geriatric Depression Score, WHO-FIVE-World Health Organization five well-being questionnaire, TUG-Timed Up and GO test, IADL-Instrumental activities of Daily Living, ADL-Activities of Daily Living, SD-Standard Deviation, SE-Standard Error

Table 2: Distribution of Participants based on Study variables and Multiple Binary logistic regression analysis between factors and abuse (N= 65) [Variables showing p value <0.2 on bivariate analysis were included.]

Factors Dependent variables	Total elderlies	Abused (%)	OR	95% CI	p-value	AOR	95% CI	p-value
Age group								
60-69	242	38(15.7)	Ref					
70-79	86	18(20.9)	1.42	0.76-2.67	0.2	1.136	0.5-2.5	0.75
>80	27	9(33.3)	2.68	1.12-6.4	0.02	0.67	0.59-8.8	0.22
Gender								
Males	140	47(33.5)	Ref					
Females	215	18(8.3)	1.89	1.06	0.03	1.44	0.7-3.05	0.31
Marital Status								
Currently Married	178	25(14.0)	Ref					
Marital status Widowed	177	40(22.5)	1.81	1.03-3.19	0.03	1.3	0.65-1.62	0.54
Socioeconomic class								
Middle class & above	63	7(11.1)	Ref					
Lower class &lower middle	292	58(19.8)	1.9	0.85-4.5	0.10	1.24	0.47-3.29	0.65
Land ownership								
<1acre	297	38(12.7)	Ref					
No Land	76	24(31.5)	2.36	1.29-4.33	<0.01	1.41	0.67-2.9	0.36
Poor well- being								
No	305	52(17.0)	Ref					
Yes	50	13(26)	4.56	2.05-10.16	<0.01	1.1	0.45-2.78	0.8
Self-rated health								
Poor	123	16(13.0)	Ref					
Fair	53	7(13.2)	1.01	0.39-2.63	0.01	1.8	0.8-4.2	0.12
Good	41	7(17.0)	1.01	0.39-2.63	0.97	0.9	0.3-2.6	0.87
Very good	62	14(22.5)	1.95	0.85-4.31	0.09	0.98	0.39-2.4	0.9
Excellent	76	21(27.6)	1.37	0.52-2.6	0.51	0.92	0.3-2.8	0.89
Felt important to your family								
Important	260	34(9.2)	Ref					
Not important	10	5(50)	5.65	1.51-21.06	<0.01	2.92	1.6-5.2	<0.01
Somewhat important	85	26(30.5)	2.88	1.58-5.26	<0.01	6.6	1.8-24.1	0.04
Duration of exercise								
<30 min	165	26(15.7)	Ref					
Not doing	190	16(8.4)	2.95	1.45-5.98	<0.01	1.1	0.45-1.5	0.5
Depression based on GDS^3 score								
No risk	296	46(15.5)	Ref					
Risk present	59	19(32.2)	5.72	3.09-10.59	<0.01	4.2	1.8-9.8	<0.01
Disability based on Skeletal deformity								
No	314	47(14.9)	Ref					
Yes	41	18(43.9)	5.58	2.51- 12.38	<0.01	3.28	1.09-9.8	0.03

OR - Odds Ratio; CI -Confidence Interval; GDS -Geriatric Depression Scale; AOR-Adjusted odds ratio

Table 3: Association of the types of Elderly abuse and Mental well being

Types of abuse	Poor Well-being (%)	Good well-being (%)	Total (%)	OR	95% CI	AOR	95%CI	P Value
Physical Abuse								
No	44 (88)	300 (98.4)	344 (96.9)	7.59	2.07-27.7	1.98	0.21-6.6	0.83
Yes	6 (12)	5 (1.7)	11 (3.1)					
Verbal Abuse								
No	35 (70)	278 (91.1)	313 (88.2)	12.88	4.8-34.4	1.12	0.33-4.6	0.7
Yes	15 (30)	27 (8.9)	42 (11.8)					
Economic Abuse								
No	39 (78)	285 (93.4)	324 (91.3)	5.29	2.1-13.3	1.58	0.39-6.4	0.51
Yes	11 (22)	20 (6.6)	31 (8.8)					
Showing Disrespect								
No	33 (66)	270 (88.5)	303 (85.4)	4.82	2.7-14.9	1.8	0.6-5.90	0.27
Yes	17 (34)	35 (10.5)	46 (24.6)					
Neglect								
No	39 (78)	285 (93.4)	324 (91.3)	6.41	2.05-11.3	6.2	3-13.01	0.01
Yes	41 (22)	17 (5.6)	28 (7.9)					

OR - Odds Ratio; CI -Confidence Interval; AOR-Adjusted odds ratio

Table 4: Distribution of Elderly abuse victims based on (i)relationship of the perpetrators with them and (ii)the number of perpetrators responsible for abuse[N=65]

Details of perpetrators	Elderly (%)
Based On Perpetrator	
Daughter in law	13 (20)
Unable to reveal	14 (21.5)
Son	10 (15.3)
Son and Daughter in Law	14 (21.5)
Son and Daughter	4 (6.1)
Spouse	3 (4.6)
Others	3 (4.6)
Son in Law	2 (0.3)
Daughter	1 (0.1)
Grandchildren	1 (0.1)
Based on Number of Perpetrators Involved	
Single	8 (12)
More than one	57 (88)

After performing bivariate analysis, variables that showed p values less than 0.2 were used for regression analysis. On adjusting with other covariates, the factors which had an association with elder abuse were the GDS risk score [OR4.29 (1.8-9.8)] (p<0.01) and presence of skeletal deformity [OR 3.28(1.09-9.8)] (<0.05).

Table 3 showed that, among all forms of elderly abuse, prevalence of physical abuse was 12%, Verbal abuse was 15%, Neglect was 11%, Economic abuse (11%) and disrespect was 34%. Regression analysis between types of abuse and poor mental well-being showed that highest prevalence was that of verbal abuse OR of 12.88 (95%CI,4.8-34.4). On adjusting with all types of abuse, neglect had a significant association with poor mental wellbeing.) p<0.01) with OR6.2(3-13.01).

Table 4 depicts the distribution of the relationship of the perpetrators of elderly abuse. In more than 40% cases, the daughter in law alone or in unison with the son were abusing the elderly of their family. In 14 (21%) cases, although the perpetrator was a close relative but their identity was not revealed. In 10 (15%) cases they found that their own son was abusing the elderly parent while in 2 % cases, daughter was the abuser. In only 3(4.65%) elderly, spouse was the abuser. Figure 1(b) shows that in 8(12%), the number of perpetrators involved was more than one person.

DISCUSSION

Mental well-being among the elderly is not a priority area in many low-income countries and its nature of association with elder abuse requires more evidence in both the research and policy fields. In the present study the estimates for the prevalence of abuse patterns showed wide variations across studies.[8,12,22,23] The prevalence of elder abuse in the present study was 18.3%, in line with studies by Chokkhanathan et al. (14%)[8] and Skirbek et al. (11%)[12]. Higher prevalence was found for physical abuse (25%) by Kaur J et al[22]. Chaurasia et al. found the prevalence of abuse to be 80%.[23] In this study, majority, 38 (58.46%) of the elderly were from 60-69 years group, with 47 (72.31%) females and 18 (27.69%) males and it was in line with other studies.[9], Those belonging to the lower middle and lower classes were abused more than middle classes and above. Similar results by Sinha et al[16] showed that elder abuse was found in poorer wealth quintiles.

The factors with a significant association in the present study were lower ratings for Self-rated health, those considering themselves *Not important* or *Somewhat Important* for their families, and those who were widowed/widowers conforming with other studies.[8,24,25,26]

Abuse showed higher association with those who had a risk of developing depression. A significant difference between the mean scores of GDS was found in this study. Higher GDS scores (indicating higher risk of developing depression) were found in the abused. This could be explained by the two-way relationship between abuse and state of developing depression as shown by Koga C et al.[27] The state of risk of developing depression is closely associated with symptoms of poor mental well-being as shown in the present study. Aged persons are vulnerable to becoming more isolated, unable to express their needs and feel less important due to their physiological changes in the face of changing societal structure. As their needs are not expressed clearly, their needs take a backseat. The elderly who are at higher risk of depression have symptoms of anxiety, boredom and tend to be socially handicapped. When such individuals experience abuse from their family members, it can result in full blown depression, as they may become anxious about the future and experience feelings of despair. In older adults who have no one to confide in about their abusive experiences, this isolation can contribute to the development of depressive symptoms. Thus, mental well-being of elderly and risk of developing depression are interlinked with abuse. However which one is the cause and which one is an effect is an area needing further research to establish a clear temporal relationship.

The findings of the present study revealed that elderly individuals who did not own any land had 2.63 times higher odds of experiencing abuse. This result aligns with previous research indicating a correlation between abuse and lower socioeconomic status, specifically within poorer wealth quintiles.[16] In Indian society, owning land is often viewed as a symbol of self-sufficiency and economic security. Elderly individuals who possess land tend to receive more respect and social standing. On the other hand, economically deprived individuals, although they may provide care for the elderly, often rely on them for financial support. This situation arises because children are aware that the landholding may be inherited by them or used for their benefit when the need

arises. Consequently, the absence of any asset, such as land ownership, could potentially contribute to an increased risk of experiencing abuse events.

The study revealed a higher prevalence of abuse among individuals who were not engaging in regular physical activity compared to those who exercised for at least 30 minutes daily. This finding could be attributed to the positive impact of exercise on mental well-being, primarily through the release of endorphins. As Sharma et al. described that engaging in physical activity was associated with improved mental well-being by reducing anxiety, depression, and negative emotions, while also enhancing self-esteem and cognitive abilities.[28] Additionally, the higher instances of abuse in individuals who were not physically active could be influenced by other factors. These individuals were more likely to stay within their homes, leading to increased interaction with caregivers and potentially greater dependence on them for their daily needs. This increased dependence could create a power imbalance creating a dynamic where the caregiver would hold a significant control and influence over the individual. This power imbalance may make it easier for the caregiver to exert abusive behaviors or manipulate and exploit the vulnerable individual thereby increasing the risk of abuse.[29] Therefore, the combination of increased dependence and limited social support increased the risk of abuse for elderly who were not engaging in regular physical activity.

Unlike other studies, no association was found between education and elderly abuse in this study.[23] Male gender was protected against abuse compared to females, contrary to Chandanshiva et al.[30], where no association was found between elder abuse and gender However, this observation aligned with the societal norms prevalent in Indian society, particularly in rural areas, where gender preferences and disparities are still evident. Predominantly in gender biased societies like rural Indian culture, being male can significantly influence the way caregivers provide care. Males are more likely to possess land, have pensions, and enjoy better economic security compared to females. They are often exempted from household chores and are generally accepted to spend extended periods outside the house without raising concerns. On the other hand, female elders are often expected to take care of grandchildren, assist with household chores, and have more interaction with caregivers. These gender-based expectations and societal conventions can contribute to differential treatment and protection against abuse for male elders compared to females. The economic advantages and reduced responsibilities placed upon male elders may create a more favourable environment for their well-being and protection against abuse.

The elderly with skeletal deformities or functional limitations (ADL scores) had higher odds of being abused thereby corroborating the strong association between functional ability and abuse in the present study.[5] The presence of physical disability as discussed above could lead to power imbalance and increase risk of abuse. Also, verbal abuse had the highest association with poor mental well-being, similar to a study by Terry et al. that found it to be a strong predictor of mental health.[31] They found that verbal mistreatment was a significant negative predictor of social functioning and mental health. In their study, people who underwent verbal abuse also reported higher levels of depression and poorer quality of life compared to elderly individuals reporting no verbal abuse.

It is seen from Table 4, that the majority perpetrators were family members and 57(88%) had been abused by more than one family member. Table 4 revealed the perpetrators of elderly abuse and it was evident that, in more than 40% cases, the daughter in law alone or along with the son were the abusers of the elderly in their family. It was seen that majority elderly (21.5%) were either abused by Son and daughter in law in unison or by only daughter in law. Thus, the present study conformed with the results of other studies that found family members to be the most common abusers of elderly in India.[8,12]

In 14 (21%) cases, although the perpetrators were close relatives but their identity was not revealed. This observation shows how despite the abuse, societal stigma, fear of repercussions and love for their family members could be the factors responsible for the underreporting of such cases. In 10 (15%) cases they found that their own sons were abusing the elderly parent while in only less than 2 % cases, daughter was the abuser. In only 3(4.65%) cases, spouse was found to be the abuser. The reason behind the abuse by close members indicated a huge shift in family values in the modern times that clashes with the usual Indian societal expectations. In low-income countries like India, a significant proportion of older people live in villages and experience poor socioeconomic conditions. They are often dependent on their families for financial and physical support. However, the changing dynamics of society, such as rural-to-urban migration, have led to a decrease in available caregivers for older individuals. Many young people from rural areas migrate to urban areas in search of employment opportunities, leaving fewer family members available to take care of the elderly. This shift in population distribution places an increased burden on non-migrant family members who are left responsible for the care of older individuals. The demands of caregiving can be physically and emotionally taxing, and without adequate support systems, it can lead to neglect or abuse of the elderly. Abuse can also occur due to caregivers being overburdened. These caregivers often face significant stress and societal pressure when taking on the responsibility of caring for the elderly, particularly when the elderly is unemployed, mentally or physically handicapped, and not contributing to the household income. The stress experienced by overburdened caregivers, combined with the absence of

employment opportunities or economic security for the elderly, may contribute to the occurrence of abuse. Furthermore, the frequent interaction between caregivers and elderly individuals, as the elderly spend more time within the household due to their age-related limitations, can exacerbate the potential for abuse.[1,32] While caregivers stress on one hand could be a potential risk factor, another possible reason behind abuse is the lack of empathy among young caregivers towards the elderly, particularly when the elderly are unable to participate in household duties due to physiological changes associated with aging. This lack of understanding and empathy regarding the elderly's limitations may contribute to abuse in some instances. In the Indian rural set up, abuse is more likely to be perpetrated by sons and daughters-in-law as they are the ones who are expected to be the caregivers by convention of society family structure.

Given that the primary factors contributing to elder abuse are largely sociodemographic in nature, the most effective means to address this issue is through the implementation of improved community support. However, addressing these issues require a comprehensive approach that should involve awareness programs regarding mental well-being of elderly, research, policy development to create age friendly environment and resource allocation for employment opportunities for elderly and families.

Elderly abuse is a societal predicament that necessitates further studies to better comprehend the behaviours, attitudes, and perceptions of both caregivers and victims. Additionally, it is crucial to examine how societal expectations contribute to the deterioration of mental well-being and the occurrence of abusive incidents.

LIMITATIONS

Design effect was not taken into consideration in the present study.

CONCLUSION

The present cross-sectional study concluded that rural elderly was vulnerable to abuse by their own family members. It was experienced by 18.3% of the study population, mainly in the age group of 60-69 years. Female elderly was more vulnerable to getting abused in comparison to males. Abuse was associated with poor mental well-being, higher risk of depression, widowhood and lack of physical activity. Neglect was the single most predictor for poor mental well-being. Vulnerability due to sociodemographic factors, as pointed out in this study showed that, it is a social evil that needs deeper understanding of family level problems and its relation to mental well-being. This raised important questions about the underlying factors contributing to abuse, such as chang-ing family structures, sedentary lifestyles, and ongoing urbanization. It also highlighted the need for a better support structure for the elderly in countries like India to prevent unnecessary dependence on their children. Elderly abuse being a highly sensitive subject of discussion pertaining to the stigma in Indian context, led to underreporting. It is therefore crucial to raise awareness about the mental well-being of older people. In addition, the relationship between mental well-being and elder abuse should be comprehensively studied in conjunction with sociodemographic factors.

ACKNOWLEDGEMENT

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Annexure1: Population Proportionate sampling technique method

Name of Village	Population from each village	Proportion	Participants from each village
Dinnur	704	10	36
Master colony	422	6	21
Jyotibapulinagar	704	10	36
Kannamangala	1267	18	64
Jaibheemanagar	704	10	36
Bevinamara	1126	16	57
Doddabannahalli	563	8	28
Kajisonnenhalli	704	10	36
Sonnenhalli	845	12	43
Total	7039	100	355