

Suicidal Ideation in Geriatric Population of Jaipur City

Dr. Subhash Bilonia¹, Dr. Raghav Shah² Dr. Mukesh Baiwa³ and Dr. Afifa Zafer⁴

^{1,3} Post graduate students Department of PSM, SMS Medical College, Jaipur (Rajasthan) India Email:

²Senior Registrar, Department of Psychiatry, SMS Medical College, Jaipur (Rajasthan) India

⁴Professor Department of PSM, SMS Medical College, Jaipur (Rajasthan) India

Abstract— Physical, Social and economical problem of geriatrics lead to disturbance in their psychological health and may lead to psychiatric disorders. This study is aimed to found out the suicidal tendencies in geriatric population of Jaipur city. For the study 990 geriatric individuals were identified by 30 cluster technique was adopted to cover whole city. Questions related to suicidal ideation were asked along with other socio-demographic variables. Collected data were analyzed as percentage and proportion and to find out the associated socio-demographic factors chi-square test was used. Suicidal Ideation was found in 6.77% of elderly and this Suicidal Ideation was found to be associated with age, education and present occupation of elderly. It was found significantly more in elderly who lost their spouses. Housing condition and personal hygiene were found to be directly proportional to suicidal ideation i.e. poorer the housing condition and personal hygiene more the chances to have suicidal ideation.

Keywords— Suicidal ideation, Geriatric

1. Introduction

Suicidal ideation is thought of harming and killing oneself. The number of suicides and the prevalence of suicidal tendencies are rising faster among older men than in any other age group. National Statistics shows that the number of suicides among men aged over 55 has risen by 12%.¹ It has become a global problem specially in geriatric population i.e. aged 60 years and above. Prevalence of these elderly is expected to constitute 10.2% of the total world population whereas in India it is estimated 18.4% of the total population by the year 2025². Persons above the age of 60 in India will increase from 76 million in 2001 to 137 million by 2021³.

Worldwide, people aged ≥ 75 years are more prone to commit suicide than people in any other age bracket³. Worldwide, the number of suicides per 100 000 males aged ≥ 75 years is up to twice that of males aged < 25 years.⁴ Suicide rates in elderly (mean age 67.7) in South India, were reported to be 189/lakh with the male female ratio being 1: 0.66.¹⁰ A study in India revealed that with accurate data collection, the suicide rate was nine times that of the official rate.⁵ The suicide rate in India is under reported leading to difficulty in assessing risk factors, suicidal behavior and in developing preventive measures. Inefficient civil registration systems, not proper reporting of deaths, not proper standards in certifying death, legal and social consequences of suicide as attempt to suicide is still consider illegal in India; these are few reasons for under reporting.^{6,7}

Social and economic conditions, such as poverty, break up of joint families and poor services to the elderly, pose a psychiatric threat to them. Emergence of nuclear families, increased cost of living, and change in priorities of a family has adversely affected the elderly in India. Psychiatric and physical illnesses, functional impairment, personality traits of neuroticism and social isolation are salient vulnerability factors among older as opposed to younger adults.^{8,9}

Functional dependency is common among elderly people and many would need assistance in their activities of daily life. So they need caregivers. Caregivers of elderly are either insufficiently trained to spot suicidality in older people or do not know how to deal with suicidal

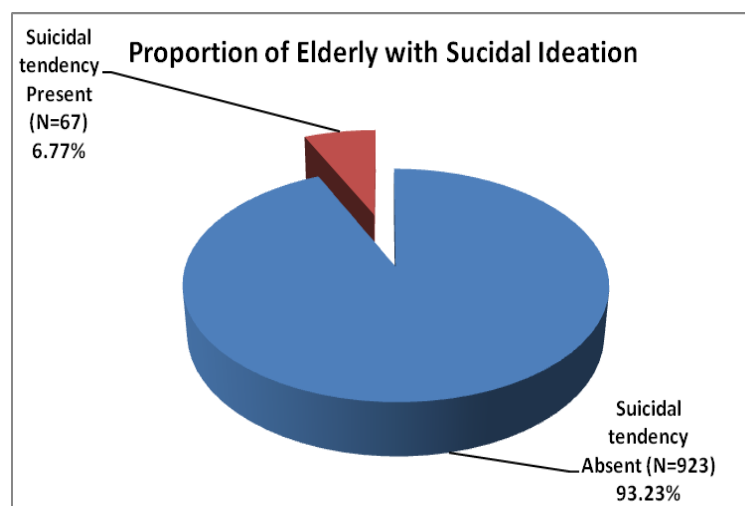
tendencies.¹⁰ Furthermore, a very little attention has been given to ethical considerations underlying the care of suicidal older people.¹⁰

2. Methodology

This descriptive analytic study was carried out on 990 elderly individuals of Jaipur city identified as per 30 cluster sampling technique. Whole Jaipur is divided into 30 zones after taking a ward wise map of Jaipur. A zone consists of 3-5 wards, out of which one ward is selected randomly. From the selected ward among all landmarks one landmark is selected randomly. From that selected landmark survey was started in that ward till 11 eligible elderly could be found out. To identify eligible elderly, elderly above 60 years willing to participate in the study were selected. These identified elderly were interrogated as per predesigned Questionnaire related to suicidal ideation along with socio-demographic details. This process is repeated in other zones also to get data from 990 elderly. Data thus collected was analyzed in percentage and proportions. To assess the association of suicidal ideation for qualitative data chi-square test and for quantitative data Unpaired 't' test/ANOVA was done statistical software Primer version 6.

3. Results

This study observed that out of total 990 elderly 67 (6.77%) had suicidal ideation with slight female predominance i.e. M:F=1:1.13(31:36 (6.28% v/s 7.25%)). (Fig. 1 & Table 1) but this female predominance was not found significant ($p>0.05$).



When the other socio-demographic factors were observed regarding association with this suicidal ideation it was found that along with sex religion and caste were also not found to be associated ($p>0.05$) but with age and socio-economic status was found to be associated ($p<0.05$) with suicidal ideation. It was revealed that as the age increases the proportion of elderly with suicidal ideation increases ($p<0.001$). And likewise elderly with suicidal ideation were found more in Class III and Class IV than others ($p<0.001$). (Table 1)

Table 1

Association of Suicidal ideation with Socio-demographic factors of Elderly

Variables		Suicidal ideation Absent (N=923)	Suicidal ideation Present (N=67)	Chi-square Test	P value LS
Age	60-69 Years (N=628)	615(97.93%)	13(2.07%)	86.997 at 2 DF	P<0.001 S
	70-79 Years (N=278)	247(88.85%)	31(11.15%)		
	80 years & Above (N=84)	61(72.62%)	23(27.38%)		

Sex	Females (N=496)	460(92.74%)	36(7.25%)	0.239 at 1DF	P=0.625 NS
	Males (N=494)	463(93.72%)	31(6.28%)		
Religion	Christians (N=5)	4(80%)	1(20%)	6.615 at 3DF	P=0.112 NS
	Hindus (N=850)	799(94%)	51(6%)		
	Muslims (N=133)	118(88.72%)	15(11.28%)		
	Sikhs (N=2)	2(100%)	0		
Caste	SC (N=221)	203(91.85%)	18(8.15%)	1.377 at 3DF	P=0.973 NS
	Gen (N=626)	588(93.92%)	38(6.08%)		
	OBC (N=114)	105(92.10%)	9(7.90%)		
	ST (N=29)	27(93.10%)	2(6.90%)		
SES	Class I (N=34)	32(94.11%)	2(5.89%)	15.892 at 3DF	P<0.001 S
	Class II (N=514)	494(96.11%)	20(3.89%)		
	Class III (N=353)	315(89.23%)	38(10.77%)		
	Class IV (N=89)	82(92.13%)	7(7.87%)		
	Class V (N=34)	0	0		

When type of family of elderly was seen it was found that proportion of elderly with suicidal ideation was maximum in extended type of family followed by joint and nuclear. This distribution of elderly with suicidal ideation with type of family was found significant. (Fig 2)

Likewise type of family, marital status of elderly was also found to be associated with suicidal ideation which was observed maximum in elderly who has lost their spouses. (Fig 3)

Fig 2

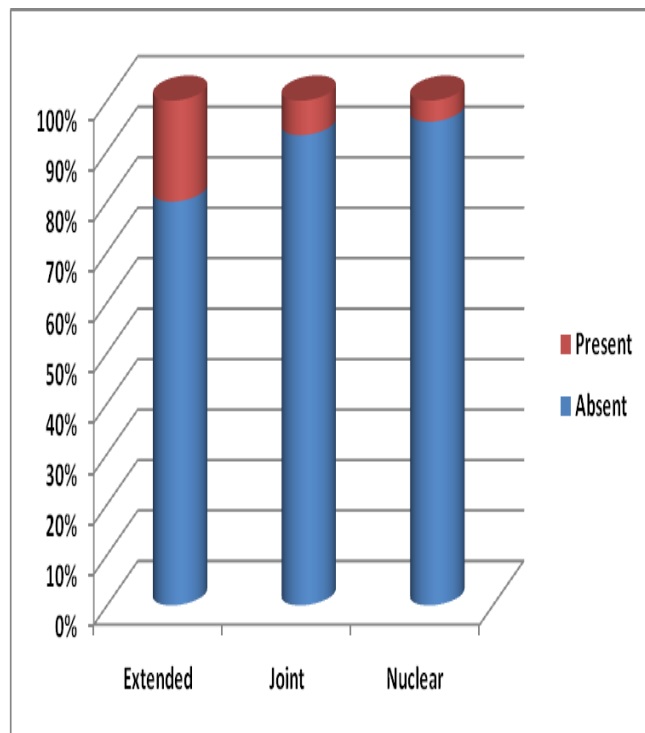
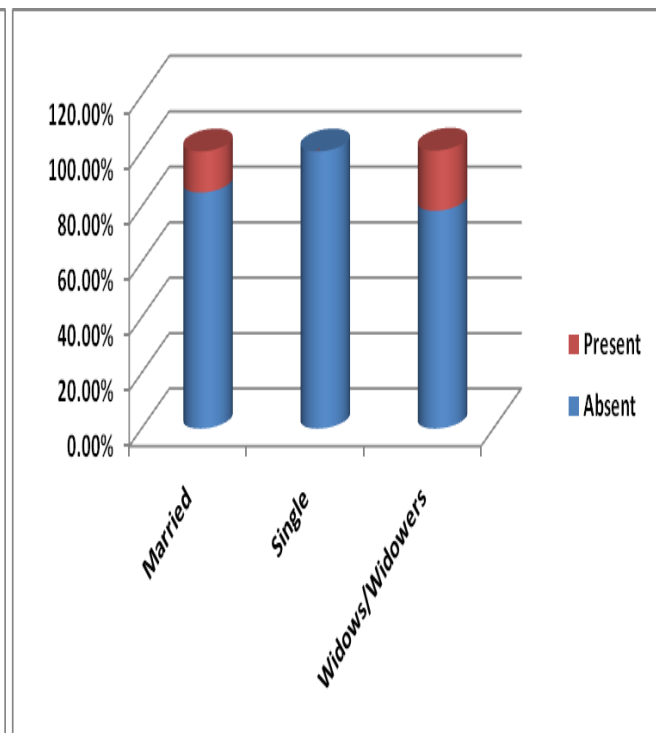


Fig 3



Chi-square = 15.613 at 2 DF; P <0.001 S

Chi-square = 19.239 at 2 DF; P <0.001 S

When the educational status of elderly was observed regarding association with this suicidal ideation it was also found to be associated with suicidal ideation. It was observed that majority of elderly who had suicidal ideation i.e. 47 out of total 67 (60.46%) were illiterates. (Table 2)

Table 2

Association of Suicidal ideation with Educational Status in Elderly

S. No.	Educational Status	Suicidal ideation Absent (N=923)	Suicidal ideation Present (N=67)	Total Elderly
1	Illiterates	395(39.54%)	47(60.46%)	442(100%)
2	Just illiterates	14(100%)	0	14(100%)
3	Primary	247(95.37%)	12(4.63%)	259(100%)
4	Secondary	126(97.67%)	3(2.33%)	129 (100)
5	Middle	110(96.49%)	4(3.51%)	114(100%)
6	Graduates	28(96.55%)	1(3.45%)	29(100%)
7	Professional	3(100%)	0	3(100%)

Chi-square = 20.032 with 6 degrees of freedom; P =0.003 S

When the present occupational status of elderly was observed regarding association with suicidal ideation in elderly it was also found to be associated with suicidal ideation. It was observed maximum in those who did not earn anything followed by who were depend on their pension only. (Table 3)

Table 3

Association of Suicidal ideation with Status of Present Occupation in Elderly

S. No.	Present Occupation	Suicidal ideation Absent (N=923)	Suicidal ideation Present (N=67)	Total Elderly
1	Pensioners	112(93.39%)	3(6.61%)	115(100%)
2	Private	265(96.70%)	9(3.3%)	274(100%)
3	House wife	306(98.07%)	6(1.93%)	312(100%)
4	Other	40(97.56%)	1(2.44%)	41(100%)
5	None	200(80.65%)	48(19.35%)	248(100%)

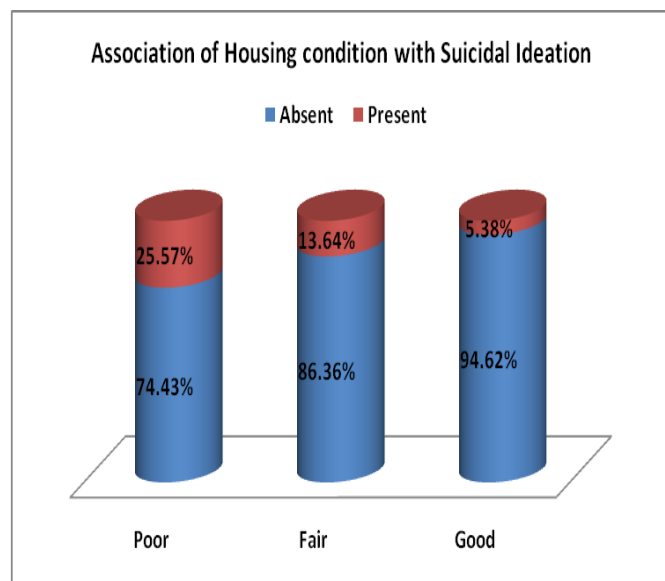
Chi-square = 83.517 with 4 degrees of freedom; P <0.001 HS

When housing condition of elderly was observed it was found that proportion of elderly with suicidal ideation increases with degradation of housing condition i.e. maximum elderly with suicidal ideation (25.57%) were belonged to poor housing condition group and as the housing condition improves the proportion of elderly with suicidal ideation decreases. This variation was also found significant. (Fig 4)

Like housing condition, personal hygiene also found to be associated with suicidal ideation in elderly. Maximum elderly with suicidal ideation were found with poor personal hygiene and as the

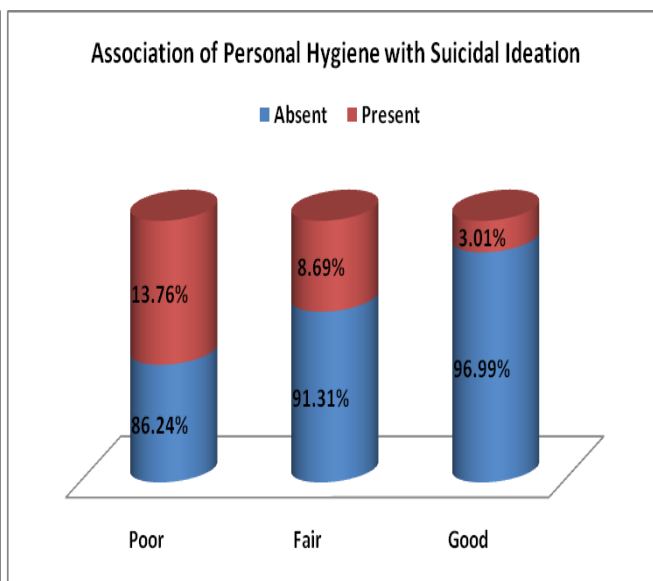
personal hygiene improves the proportion of elderly with suicidal ideation decreases. This variation was also found significant. (Fig 5)

Fig 4



Chi-square = 25.292 at 2 DF; P <0.001 S

Fig 5



Chi-square = 20.740 at 2 DF; P <0.001 S

4. Discussion:

This study observed 6.77% suicidal ideation in elderly which is slightly lesser than that of National Statistics data which shows number of suicides 12%.¹ This prevalence of suicidal ideation may be less because of more work culture in elderly and better planning for elderly nowadays like old age pensions, old age home, legalization of care of parents etc.

This study also observed slight female pre dominance in suicidal ideation i.e. 46.3%v/s 53.7% although this female predominance (M:F=1:1.13) was not found significant ($p>0.05$). Well comparable findings were of a study done at eight different sites¹¹ where it was seen that there were more female suicide attempters than males at the emergency-care departments ranging from 51.3% (Chennai) to 71.2% (Durban). Srivastava and colleagues also reported females predominance in their study.¹²

Present study also observed that sex, religion and caste of the elderly were not found to be associated ($p>0.05$) with suicidal ideation but age was found to be associated ($p<0.05$). It was revealed that as the age increases the proportion of elderly with suicidal ideation increases ($p<0.001$). Other authors^{11,12} also found that as the age as increases suicidal ideation also increases.

It was also found in this study that elderly with suicidal ideation were found more in Class III and Class IV than others ($p<0.001$). This variation was found significant in the present study. As far as the other studies were concerned both the sides supports study reports are available; some authors^{4,6,9,11} found that SES is not at all influence suicidal tendency but other^{5,7,12,15} reported more in Class III and IV alike the present study. This wide difference in opinion may be because of the different political and administrative system.

This study observed that suicidal ideation vary significantly with the type of family. It was found maximum in extended type of family followed by joint and nuclear. Many author^{7,13,14} also reported

quarrels with in-laws and problems in interpersonal relationships and domestic violence as major predisposing factors of suicidal ideation which are more in joint and extended families.

Present study also revealed that suicidal ideation was observed maximum in elderly who has lost their spouses. Findings of Abraham VJ et al¹⁵ were also in resonance with findings of present study. This observation was well supported by the fact revealed in a study reported a relative risk for widowed men being over three times that of married elderly males.¹⁶

It was also revealed in this study that majority of elderly who had suicidal ideation 60.46% were illiterates. Studies were in both the sides; some mention more suicidal ideation in educated ones whereas other found more suicidal ideation in illiterates. This wide difference in opinion may be because of the level professional satisfaction in that system. Likewise the education, present occupation also influences prevalence of suicidal ideation. In this present study it was observed maximum in those who did not earn anything which also obvious that lack of money also predisposes to suicidal ideation.

This study also reported that proportion of elderly with suicidal ideation significantly increases with degradation of housing condition and personal hygiene. This may be vice versa because of poor housing condition and personal hygiene suicidal ideation may come or because of suicidal ideation poor housing condition and personal hygiene may occur.

CONCLUSIONS

Suicidal tendency was found nearly in one tenth of elderly. It was found more in older age, extended or joint type of family, illiterate and who do not earn. It was also found more in those with poor housing condition and personal hygiene. It was also found more in those elderly who lost their spouses. So to reduce the prevalence of this suicidal ideation there should be proper provision of old age homes, job opportunities, recreational facilities targeting to this group. Health education programmes should be encouraged about caring and identification of suicidal ideation. So they can be identified earlier and treated accordingly. Government should also take some legal actions against defaulter belongings of elderly along with making programmes for caring geriatric group.

REFERENCES

1. <http://www.theguardian.com/society/2012/jul/15/suicide-rise-older-men>
2. McIntosh J, Santos J, Hubbard R, et al: Elder Suicide: Research, Theory and Treatment. Washington, DC, American Psychological Association, 1994
3. World Health Organization Figures and facts about suicide. Geneva: WHO, 1999 [Ref list]
4. De Leo D, Spathonis K. Suicide and suicidal behaviour in late life. In: De Leo D, Bille-Brahe U, Kerkhof A, et al, eds. Suicidal behaviour. Theories and research findings. Cambridge: Hogrefe & Huber, 2004:253–286.
5. Joseph A, Abraham S, Muliyl JP, George K, Prasad J, Minz S, et al. Evaluation of suicide rates in rural India using verbal autopsies, 1994- 9. BMJ 2003; 326 : 1121-22.
6. Murthy RS. Approaches to suicide prevention in Asia and the Far East. In The International Handbook of Suicide and Attempted Suicide. Hawton K, Heeringen KV (eds). John Wiley and Sons Ltd: Chichester partner abuse among women in non-urban domestic violence shelters 2000.
7. Gururaj G, Isaac M, Subhakrishna DK, Ranjani R. Risk factors for completed suicides: A casecontrol study from Bangalore, India. Inj Control Saf Promot 2004; 11 : 183-191.
8. Smith SM, Goodman RA, Thacker SB, Burton AH, Parsons JE, Hudson P. Alcohol and fatal injuries: Temporal patterns. American Journal of Preventive Medicine, 1989; 5(5) : 296-302.

9. Draper B. Attempted suicide in old age. *International Journal of Geriatric Psychiatry*, 1996 : 11; 577-588
10. Adamek M E, Kaplan M S. Confidence in managing late-life suicidality. A national survey of nurse practitioners. *J Ment Health* 2003; 12(1): 171–182.
11. Alexandra Fleischmann, Lakshmi Vijayakumar, Jose´ M, Bertolote, Diego de leo, Neury Botega, Michael Phillips, Merike Sisask, Kazem Malakouti, Lourens Schlebusch, Damani de Silva, Van Tuong Nguyen and Danuta Wasserman: Characteristics of attempted suicides seen in emergency-care settings of general hospitals in eight low- and middle income countries. *Psychological Medicine* 2005; 35 : 1467–1474.
12. Srivastava MK, Sahoo RN, Ghotekar LH, Srihari Dutta M, Danabalan TK, Dutta TK, Das AK. Risk Factors Associated with Attempted Suicide : A Case Control Study *Indian Journal of Psychiatry*, 2004; 46(1) : 33-38
13. Cattell, Jolley DJ. One hundred cases of suicide in elderly people. *British Journal of Psychiatry* 1995, 166 : 451–457.
14. Andrews JA, Lewinsohn PM. Suicidal attempts among older adolescents: Prevalence and cooccurrence with psychiatric disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 31 : 655-662.
15. Abraham VJ, Abraham S, Jacob KS. Suicide in the elderly in Kaniyambadi block, Tamil Nadu, South India. *International Journal of Geriatric Psychiatry* 2005; 10 : 953-955.
16. Conwell Y, Duberstein PR, Cox C, Herrmann JH, Forbes NT, Caine ED. Relationships of age and axis I diagnoses in victims of completed suicide: a psychological autopsy study. *Am J Psychiatry* 1996; 153 : 1001-1008.