

RESEARCH PAPERS

**AGE & SEX RELATED ANALYSIS OF
PSYCHO-SOCIO-DEMOGRAPHIC PROFILE OF
SUICIDE ATTEMPTERS**

A Study from a General Hospital Psychiatry Unit

Suresh Kumar P.N*, Abu Abraham**, Kunhikoyamu.A.M***

ABSTRACT

Suicide and attempted suicide are major issues in health care all over the world accounting for 0.4-0.9% of all deaths (Roy, 1995). The suicide rate in India is 11/1,00,000 and in Kerala it is three times the national average with a reported rate of 32/1,00,000 (Government of India, 1999). In this cross sectional descriptive study suicide attempters were evaluated studied with respect to psychosociodemographic profile and details regarding the suicide attempt. Those below the age of 30 years were mostly unmarried, unemployed, having a psychiatric diagnosis of adjustment disorder and most attempts were within 24 hours of stressor. Those above 30 were mostly married, employed, suffering from major psychiatric illness like depression and with a longer interval between the attempt and stressor. Female attempters were mostly married, unemployed, suffering from adjustment disorder whose most common mode of attempt was drug over dosage. Male attempters were mostly unmarried, employed, had a stronger family loading of mental illness in second-degree relatives and suffered from major depression. Their most common mode of attempt was organophosphorus poisoning. The implications of these findings are discussed in the context of prevention and further management strategies.

Key words- suicide, attempted suicide, general hospital psychiatry.

INTRODUCTION

Suicide and attempted suicide are major issues in health care all over the world accounting for 0.4-0.9% of all deaths (Roy, 1995). WHO defines suicidal act as the injury with varying degrees of lethal intent and suicide as a suicidal act with fatal outcome (1968). The suicide rate in India is 11 per one lakh population and in Kerala it is three times the national average with a reported rate of 32 per one lakh population (Government of India, 1999). In Kerala on an average 135-217 people make suicide attempt every year (Kumar, 1995). In absolute terms it is approximately 44,000-65,000 individuals in a year. Suicide is a complex behaviour, which is influenced by biological as well as sociocultural environment. The gender role and expectation from different age groups of people differ in different countries. To effectively intervene in such conditions a thorough knowledge of the psychosociodemographic factors are essential. Present study is an attempt to look into these factors.

AIM

To find out the age (<30 & >30 yrs) and sex related differences in the psychosociodemographic profile of suicide attempters.

Materials & Methods Study population: 215 consecutive suicide attempters evaluated in Suicide Prevention Clinic, Department of Psychiatry, Medical College Hospital, Kozhikode.

Period: 1st January 2001 to 31st July 2001.

Method: Cross-sectional study design

Tools: Cross-sectional study design Tools: - Specially designed proforma documenting sociodemographic and illness variables and details regarding the mode of attempt.

Psychiatric diagnosis - DSM IV (APA, 1994)

Statistical Analysis: - Student's test

Chi - square test with Yate's correction

RESULTS

In comparing the age related psychosocio-demographic data the majority were below 30,

*Senior Lecturer, **Post Graduate Student, Prof. & Head, Department of Psychiatry, Medical College, Calicut.

*For Correspondence: M26 (A) 62, Malaparamba Housing Colony, Calicut-673009, Kerala, India.

unmarried, unemployed, having a psychiatric diagnosis of adjustment disorder and most attempts were within 24 hours of stressor. Those above 30 were mostly married, employed, suffering from major psychiatric illnesses like depression and with a longer interval between attempt and stressor (Table 1 to 4).

Table - 1
Age Vs Psychosociodemographic factors

	< 30 yrs N=146	> 30 yrs N=69	Significance χ^2 /tP
Marital status			
Unmarried	88	6	$\chi^2=50.95$ 0.000*
Married	54	60	
Separated	4	3	
Religion			
Hindu	113	61	$\chi^2=5.57$ 0.061
Christian	2	2	
Muslim	3	1	
Domicile			
Rural	104	59	$\chi^2=5.6$ 0.130
Urban	39	9	
Tribal	3	1	
Employment			
Unemployed	85	25	$\chi^2=8.21$ 0.004
Employed	61	44	
Education (mean)	9.82 ± 2.893	6.072 ±3.558	NS

Table - 2
Age Vs Psychosociodemographic factors (contd)

	< 30 yrs N=146	> 30 yrs N=69	Significance χ^2 /tP
Family history In 1st degree relative			
Yes	34	15	$\chi^2=0.32$ 0.937
No	112	54	
Family history In 2nd degree relative			
Yes	22	10	$\chi^2=0.01$ 0.925
No	124	59	
Medical Illnesses			
Yes	52	22	$\chi^2=0.70$ 0.160
No	94	47	

Table - 2 Contd...

	< 30 yrs N=146	> 30 yrs N=69	Significance χ^2 /tP
Past psychiatric history			
Yes	30	22	$\chi^2=3.67$ 0.160
No	116	47	
Past suicide attempt			
Yes	28	11	$\chi^2=0.15$ 0.700
No	118	58	
Mean no. of attempts	0.295 ± 0.726	0.290± 0.709	NS

Table - 3
**Age VS psychosociodemographic factors
(contd)**

	< 30 yrs N=146	> 30 yrs N=69	Significance χ^2 /tP
Specific cause for attempt			
Yes	135	61	$\chi^2=0.52$ 0.470
No	11	8	
Time difference between stress and attempt			
Within 24 hrs	63	12	$\chi^2=18.35$ 0.001*
24hrs - 1 wk	19	6	
1wk - 1 month	13	14	
> 1 month	37	23	
Not known	12	11	
Suicide note			
Yes	19	12	$\chi^2=1.21$ 0.547
No	125	56	
Time of attempt			
12midnight-6am	8	5	$\chi^2=7.65$ 0.105
6am - 12 noon	36	18	
12 noon - 6pm	49	13	
6pm-12midnight	50	32	
Not known	0	1	
Venue of attempt			
House	111	57	$\chi^2=1.24$ 0.265
Outside	35	11	

Table - 4
Age Vs Psychosociodemographic factors
(contd..)

	< 30 yrs N=146	> 30 yrs N=69	SignificanceX2/P
Method used for attempt			X ² =14.29
Organophosphorus poison	65	28	0.075
Corrosive	14	1	
Native poison	3	3	
Medicine overdose	41	21	
Drowning	1	0	
Hanging	11	12	
Cutting	2	2	
Jumping	6	0	
Burns	1	0	
Psychiatric diagnosis			X ² =5.29
Major depression	39	27	0.021*
Bipolar affective disorder	7	1	
Schizophrenia	0	2	
Adjustment disorder	54	14	
Others	21	15	
Nil	24	10	

In the sex related psychosociodemographic data, most were females who were married, unemployed, suffering from adjustment disorder whose most common mode of attempt was drug over dosage. On the other hand males were mostly unmarried, employed, had a stronger family loading of mental illness in second-degree relatives and suffered from major depression. Their most common mode of attempt was organophosphorus poisoning (Table 5 to 8).

Table - 5
Sex Vs Psychosociodemographic factors

	Male N=102	Female N=113	SignificanceX2/TP
Marital status			X ² =10.00
Unmarried	55	39	0.007*
Married	46	68	
Separated	1	6	

	Male N=102	Female N=113	SignificanceX2/TP
Religion			X ² =3.66
Hindu	85	89	0.130
Christian	1	1	
Muslim	16	21	
Domicile			X ² =3.79
Rural	82	81	0.285
Urban	18	30	
Tribal	2	2	
Employment			X ² =111.73
Unemployed	13	97	0.000*
Employed	89	16	
Mean education (Yrs)	7.598 ± 3.185	8.584 ± 3.479	NS

Table - 6
Age Vs Psychosociodemographic factors
(contd)

	Male N=102	Female N=113	SignificanceX2/TP
Family history In 1st degree relative			X ² =0.32
Yes	21	81	0.570
No	28	85	
Family history In 2nd degree relative			X ² =4.17
Yes	21	11	0.041*
No	81	102	
Medical illnesses			X ² =2.82
Yes	30	43	0.243
No	72	70	
Past psychiatric history			X ² =5.36
Yes	31	21	0.068
No	71	92	
Past suicidal attempt			X ² =1.13
Yes	22	17	0.288
No	80	96	
Total no. of attempts (mean)	0.363± 0.728	0.230± 0.707	NS

Table - 7
Sex Vs psychosociodemographic factors
(contd)

	Male N=102	Female N=113	SignificanceX2P
Specific cause for present attempt			X ² =0.15
Yes	95	103	0.815
No	9	10	
Time difference between stress and attempt			X ² =4.30
Within 24 hrs	29	46	0.367
24hrs - 1 wk	13	12	
1wk - 1 month	16	11	
> 1 month	30	30	
Not known	0	13	
Suicide note			X ² =1.28
Yes	16	15	0.555
No	24	97	
Time of attempt			X ² =9.12
12midnight-6am	7	6	0.582
6am - 12 noon	17	37	
12 noon - 6pm	30	32	
6pm-12midnight	46	36	
Not known	0	1	
Venue of attempt			X ² =14.87
House	68	100	0.001*
Outside	34	12	

Table - 8
Sex Vs Psychosociodemographic factors
(contd..)

	Male N=102	Female N=113	SignificanceX2P
Method used for attempt			X ² =34.61
Organophosphorus poison	56	37	0.000*
Corrosive	2	13	
Native poison	2	4	
Medicine overdose	17	45	
Drowning	0	1	
Hanging	18	5	
Cutting	2	2	
Jumping	2	4	
Burns	0	1	

	Male N=102	Female N=113	SignificanceX2P
Psychiatric diagnosis			X ² =3.94
Major depression	29	37	0.047*
Bipolar affective disorder	4	4	
Schizophrenia	2	0	
Adjustment disorder	25	43	
Others	25	11	
Nil	17	17	

DISCUSSION

Out of 215 suicide attempters 102 (47.4%) were males and 113 (52.3%) were females. This female preponderance has been reported in studies from India and abroad (Weismann, 1974; Shukla et al, 1990; Banerjee et al, 1990). Although, male preponderance has been reported by some (Sharma & Sawang 1973; Hedge, 1980; Kumar et al, 1995, 1998 & 2000). Many studies have pointed towards the second and third decades of life as the most vulnerable phase suicide in Indian subjects. Difficulties in securing jobs, problems arising out of marriage, which takes place increasingly during the early phase of life, are some of the factors, which enhance the suicide risk in this age group of our people (Shukla et al, 1990; Kumar, 1998). Our study shows that less than 30 years age group were more unemployed and had concurrent psychiatric diagnosis of adjustment disorder. This age group of people attempted suicide within 24 hours of stressful event, which reflects their poor coping strategies. The elderly (more than 30 yrs age group) had more severe psychopathology, mainly depression (27%). This is in keeping with the observation by Venkoba Rao (1991). The preferred mode of attempt was organophosphorus poisoning in both age groups. This might be due to the fact that majority is from rural background, has agriculture as their main occupation and easy availability of its as pesticides and insecticides and with no legal restriction on its sale. This fact has been voiced in many Indian studies (Ganapathy & Rao 1966; Nandi et al, 1979; Sharma, 1998; Jan et al, 1999; Kumar, 2000). Males had more family history of mental illness in 2nd degree relative, had more past suicide attempts, consumed organophosphorus poison and attempted suicide at night. Females more often found to be married, unemployed, had adjustment disorder, consumed drug over dose, preferred house as their

venue and attempted suicide between 6 A.M. and 12 Noon. These findings are a reflection of the cultural and social factors. The fact that majority of females were unemployed housewives and their movement is restricted to house explain their choice of venue. This has been reported earlier (Ponnudurai et al, 1997). Their preferred mode of attempt was medicine over dosage, which goes hand in hand with the finding that females had more physical illness compared to males. It is felt that the availability of a method is important when the suicidal act is impulsive in nature (Farmer, 1980). Easy availability of organophosphorus compound as the commonest mode of suicide attempt especially among the farmers of India has been reported previously (Kumar, 2000). Matrimonial status is not a determinant factor for female suicide attempters whereas married status is protective for males. This has been confirmed in earlier studies (Ponnudurai & Jayakar, 1980). As reported by Venkoba Rao (1992), attempted suicide cases are on the rise in the third world. Effective suicide prevention measures need to be taken in the form of early identification of suicide prone individuals, provisions of better psychosocial and environmental support to the youngsters to help them resolve their emotional crisis. The increasing problem of organophosphorus poisoning and drug overdose demands strict legal scrutiny in the provision of these compounds.

CONCLUSION

The psychosociodemographic profile of suicide attempters varies with age and sex. Those below 30 yrs had poorer support system and coping strategies and the attempts were mostly impulsive, associated with stressful life events. Those above 30 yrs suffered more medical and psychiatric illnesses. The mode of intervention for both is different and identifying the above factors goes a long way in the management of such individuals. Women warranted a greater scrutiny into the actual stressor and improvement of support systems and coping behaviour while men warranted a better management of underlying psychiatric illness.

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