A STUDY ON THE PATTERN OF SUICIDE IN KARACHI PAKISTAN

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ABSTRACT

Suicide is a serious public health issue. It affects families and in large, societies badly. Suicide is a common problem of the world, even greater in the developed world.[1] Suicide rates are on rise; alarming situation is that it is more common phenomenon in young age group. Between ages 15 – 24 years it is tripled in past few decades in USA.[1] Its causes are complex and culture oriented. Pakistan is no difference but negligence in reporting system makes it unreliable. Karachi is a big cosmopolitan city of Pakistan reflecting all communities and ethnic groups. The present study was conducted in Karachi with objectives: to graduate the pattern of suicide in Karachi, and its association with gender, residence, age group, marital status, employment status and monthly income.

Materials and Methods: This is a descriptive analytical study which is based on five years Police record, taken from 18 Towns of Karachi. Fifty four Police Stations, three from each Town were randomly selected. Purposefully ten suicide cases were taken from each Police Station. Forty cases were rejected as having incomplete information. A total of 500 suicide cases from police record were taken. Further 200 attempted cases of suicide from National Toxic Centre, JPMC were included making a total of 700 suicide cases.

Results: There were 2.46 suicide cases per 100,000 population per year. The mean age was 28.19 years in males (SD = 8.79) and in females it was 26.07 years (SD = 8.25). The suicide was committed mostly by males (n = 450). There has been continuous increase in suicide from 2001 to 2005. Married (48.57%) and young people (26%) committed more suicide. Regarding occupation, unemployed were on top (40.1%). Highest suicide rate was in urban areas (71%). Hanging was the main method of suicide in males (35.7%) and in females it was poisoning (45.5%). There was no significant association of gender and marital status with suicide group (P = 0.11 and P = 0.061 respectively). However residence, age and employment status showed significant association; P = 0.00, P = 0.02 and P = 0.03 respectively.

Key Words: Suicide, Central City Police Officer (CCPO).

INTRODUCTION

The word Suicide comes from the Latin Sui (of oneself) and cide or cidium (a killing).[1] Suicide has been the subject of numerous studies dating back to Emile Durkheim. He says "Suicide is applied to all cases of death resulting directly or indirectly from a positive or negative act of the victim himself, which he knows will produce this result".[2] Suicide is an enigmatic and disconcerting phenomenon, which eludes easy explanation. The literature on suicide, however, has gradually expanded.[3]

Allah was explicitly in the Quran, "And do not kill yourselves. Surely, Allah is Most Merciful to you".[4] In last few years suicidal rate has increased in Muslims living in Non-Muslim countries, like America and Britain.[5]

Frequency of suicide is 2/100,000 in Pakistan.[6] More than 1 million people commit suicide in the world every year. It is the 13th leading cause of death worldwide, with China, India, and Japan accounting for almost half of all suicides.[7]

Contemporary research on suicide generally focuses on demographic, epidemiological, biological, neurological, psychological and socio-cultural issues. The epidemiological study of suicide focuses on rate of suicide, why, how, or where. The data on suicide rates, the causes or motivations of suicide, and methods of suicide shows different dimensions of the phenomenon of suicide.[8,9]

In the context of epidemiology of suicide in Pakistan, a number of studies are reported. In a study conducted in Faisalabad the incidence of suicide came out to be 1.12 / 100,000 with male preponderance.[10] A study in determining suicide rates in six cities gives different findings. The authors stated, "these figures underestimate suicide rates in Pakistan".[11] The cases of suicide in Karachi, and rest of the country, show that suicide is a serious problem. Unexplained deaths are taken to medico-legal centers for autopsy, the police are required to conduct inquiry of such cases, declare it as suicide or otherwise.

It is common in people who are living with chronic mental illness. Individuals with severe clinical depresssion and alcohol use are at highest risk if untreated.[12]

Table 1: *Basic Demography (N = 700).*

Gender and Age				
Group	*Frequency*	*%*	*Mean Age (yr)*	*SD (yr)*
Male	450	64.3	28.19	8.79
Female	250	35.7	26.07	8.25
Total	700	100		
Suicide Group				
Group		*Frequency*		*%*
Complete suicide		500		71.42
Attempted suicide		200		28.57
Total		700		100
Marital Status				
Group		*Frequency*		*%*
Married		340		48.6
Unmarried		322		46
Divorce		10		1.4
Widow		5		0.7
Unknown		23		3.3
Total		700		100
Monthly Income				
Group		*Frequency*		*%*
No earning		198		28.3
Dependent		321		45.9
< 20,000/m		118		16.9
> 20,000/m		44		6.3
Unknown		19		2.7
Total		700		100
Employment Status				
Group		*Frequency*		*%*
Employed		137		19.6
Unemployed		280		40.1
House Wife		152		21.8
Student		103		14.7
Retired		26		3.7
Total		698		99.9

In a study conducted at seven US schools a dose – response relationship was found between the number of manifestations of distress and recent suicidal ideation or serious thoughts of dropping out.[13]

A study conducted in US army showed total of 255 soldiers committed suicide in 2007–8 (2008 rate 20.2 per 100,000). Factors associated with higher suicide risk included male gender, lower enlisted rank and mental health disorders treated on an outpatient basis.[14]

Regarding suicidal thoughts and unsuccessful suicide attempts a cross – sectional survey of 17,016 youth aged 15 – 24 years was conducted in rural and urban areas of Hanoi (Vietnam), Shanghai (China) and Taipei (Taiwan) in 2006. The 12 month prevalence of suicidal ideation and attempt was 8.4% and 2.5% across all three cities, respectively.[15]

The rationale of this study was to find out pattern of suicide in the biggest and the mega city of Pakistan. Relation of different factors with suicide was also studied to understand the phenomenon of suicide explicitly.

MATERIALS AND METHODS

Subjects: Deceased records and attempted suicide persons records with their interviews.

Apparatus: Police records, National Toxic Centre (JPMC), questionnaire.

Method:

Study Design: Descriptive analytical study.

Study Setting: Police Stations of all 18 towns of Karachi, and National Toxic Centre, JPMC.

Study Duration: One year, February 2006 till January 2007.

Sampling Technique: Multistage sampling.

Sample Size: 700 suicide cases (500 completed suicide and 200 attempted suicide).

Sample Selection: ***Inclusion Criteria:*** Complete suicide from police record and attempted suicide from poisoning were included.

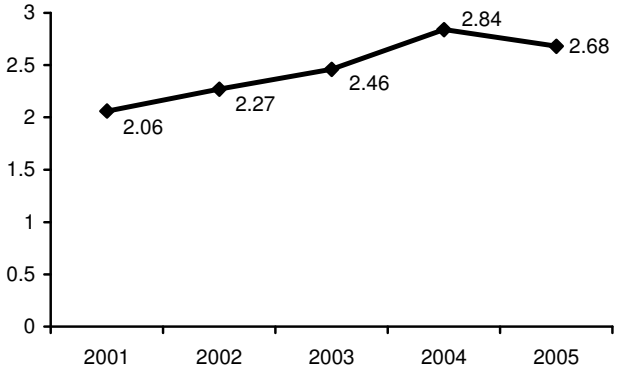

Figure 1: *Suicidal Rate / 100,000.*

Exclusion Criteria: Those who opted for participation in the study; however according to ward doctor, JPMC they had the tendency to show abnormal reaction during probing.

Ethical Consideration: Permission was taken from SHOs (station house officer) of police stations after clarifying the purpose of the study. Anonymity, Autonomy, Beneficence and Confidentiality of attempted suicidal participants were given top priority. They had complete liberty not to answer any question or quit during the study at any time.

Data Collecting Procedure: Three Police Stations were selected randomly Stations were selected randomly from each of the 18 towns of Karachi. Ten suicide cases from each Police Station were then selected in a purposeful manner; however, in record of few Police Stations there were insufficient information. Therefore, 40 cases were excluded. The information gathered from police record was coded and filled in a Performa. In attempted suicide cases the information was collected from National Toxic Centre, Ward V, JPMC. Interviewers taking information from attempted suicide cases were trained.

Data Analysis: The data from filled questionnaires were entered into SPSS – 17. Frequencies were calculated for categorical variables like gender, age group, marital status, employment status and monthly income. Mean and SD were calculated for age. Chi-square test of significance was applied to determine association of each of the in-dependent variable (gender, residence, age group, marital status and employment status) with the dependent variable i.e. completed or attempted suicide. P-value was considered significant if < 0.05.

Table 2: *Association of gender, residence, age group, marital status and occupation with suicide group.*

	Group	*Complete Suicide*	*Attempted Suicide*	*Total*	*P-value*
Gender	Male	318	132	450	0.60
	Female	182	68	250	
	Total	500	200	700	
Residence	Urban	396	116	512	0.00
	Semi urban	104	11	115	
	Rural	0	73	73	
	Total	500	200	700	
Age Group (yr)	Up to 20	132	50	182	0.02
	21 – 25	100	39	139	
	26 – 30	109	37	146	
	31 – 35	77	36	113	
	36 – 40	41	21	62	
	41 – 45	35	7	42	
	46 – 50	6	6	12	
	51 – 55	0	2	2	
	56 and above	0	2	2	
	Total	500	200	700	
Marital Status	Married	242	98	340	0.11
	Unmarried	224	98	322	
	Divorce	10	0	10	
	Widow	4	1	5	
	Unknown	20	3	23	
	Total	500	200	700	
Employment Status	Employed	89	48	137	0.03
	Unemployed	197	83	280	
	Housewife	108	44	152	
	Student	86	17	103	
	Retired	18	8	26	
	Total	498 (missing = 2)	200	698	

RESULTS

The mean age was 28.19 years in males (SD = 8.79) and in females it was 26.07 year (SD = 8.25). Suicide was committed more by males (64%). There has been continuous increase in suicide from 2001 to 2005. Married (48.57%) and young (26%) people committed more suicide. Regarding occupation Unemployed were on top (40.1%). Highest suicide rate was in urban areas (71%). Hanging was the main method of suicide in males (35.7%) and in females it was poisoning (45.5%). There was no significant association of gender with suicide group (P = .061). However residence, age, marital status and employment status showed significant association; P=.00, P=.02, P=.01 and P=.03 respectively.

DISCUSSION

Epidemiology of suicide was studied globally by different researchers.[9] In 2001 it was studied in six different countries and presumed that in 2020, approximately 1.53 million people will die from suicide, and suicide in younger age group will go on rise.[10] The present study showed suicide rate as 2.46 / 100,000 in Karachi. Other Karachi based studies are showing much

less rate. This can be due to under reporting. In the past studies rate per thousand was found as 0.72 (1964),[11] 0.11 (1981)[12] and 1.12 (2002).[6] In Muslims suicide is low. Literature on suicide shows religion sanctions.[13] Study in Nijeria reported 0.4.[14,15] In Non-Muslim countries like Genera, Switzerland it is 22.75 / 100,000.[15] In this study of five years the rate also is increasing 2.06 (2001), 2.27 (2002), 2.45 (2003), 2.84 (2004), 2.68 (2005).

In this study the suicide rate was more in males 64.3%. Suicide is comparatively common in females in urban areas.[21] Other international studies noticed suicide more common in males. In Pakistan the findings are nearly the same.[22,23] This is in consistency with the current study. This finding may be due to changed culture in Karachi. Pakistani males are supposed to earn bread and butter for the family.

In our study suicide is more common in young age group up to 25 years of age (46%). Studies regarding age and suicide relation shows younger people commit suicide more commonly than elder people.[17,18] A study in Asia and Far East and in Europe found out maximum suicide cases in age group between 25 – 30 years.[19,20] This matches with the current study. Global suicidal rates in young age are a source of alarm and calls for urgent measures to fight the menace of suicidal behavior. Joblessness, inflation, desire of easy living could be the contributing factors. Young males are often taken by miscreants who use them for their negative purposes often making them terrorists. There has been significant association between age group and suicide. Successful suicide proportion was 72.27%.

Occupation determined this phenomenon of suicide more common in unemployed people (40.11%). There has been significant association between suicide and employment status. Completed suicide in this group was 70.35%.

Marriage has insignificant effect on suicide in the study.

As far residence is concerned 73.14% suicide were committed in urban areas. There was found significant association between suicide and residence. Successful suicide rate in urban areas was 77.34%. Residence in urban areas has multiple and complicated problems like job, status, transport, expensive utilities, education. In rural areas people earn bread and butter through farming. Crop is collected for the whole year; so there is no problem of food as such. Environment is clean with less number of vehicles as compared with urban areas. Males after farming in the morning earn money through simple work there by fulfilling their daily needs. So frequency of suicide is less there.

It is ***Concluded*** that suicide is more common in young, jobless males in the urban areas as compared to their female counterparts. The problem should be taken care of as suggested below.

SUGGESTIONS

- Inflation should be decreased.
- Job opportunities should be increased.
- Development of more cities to decrease burden on already under stress cities.
- Media should play their role in promoting healthy life style practices like early to bed, early to rise, regular jogging or walking.
- Religious leaders should throw light on different aspects of suicide.

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