

SUICIDAL DEATHS; ASSESSMENT IN PESHAWAR

DR. M. ZAHID BASHIR, DMJ

Associate Professor, Trainee FCPS-II
Department of Forensic Medicine & Toxicology
Khyber Medical College, Peshawar.

DR. ZAHID HUSSAIN, FCPS

Assistant Professor
Department of Forensic Medicine & Toxicology
Khyber Medical College, Peshawar.

DR. AHMED SAEED, DMJ

Associate Professor, Trainee FCPS-II
Department of Forensic Medicine & Toxicology
Khyber Medical College, Peshawar.

DR. ANJUM ZIA MUNAWAR, DMJ

Assistant Professor
Department of Forensic Medicine & Toxicology
Khyber Medical College, Peshawar.

DR. S. MUHAMMAD AIJAZ ALI, DMJ

Associate Professor, Trainee FCPS-II
Department of Forensic Medicine & Toxicology
Khyber Medical College, Peshawar.

**PROFESSOR INAYAT-UR-REHMAN KHALIL,
FRCP**

Department of Forensic Medicine & Toxicology
Khyber Medical College, Peshawar.

ABSTRACT

Objective: To find out the incidence of suicide, the gender and age groups involved, the methods used for committing the act and to note seasonal trends if any. **Data source:** Cases brought for autopsy at the department of forensic medicine, Khyber Medical College, Peshawar. **Study design:** Non-interventional descriptive. **Setting:** Department of forensic medicine, Khyber Medical College, Peshawar. **Period:** January 1991 to December 2000. **Materials and Methods:** All 39 cases of deaths labeled as suicide on the basis of autopsy findings, police inquest and interview with relatives of the victim were selected from the autopsies. The cases were grouped on the basis of age, sex, method of suicide used, region of the body involved and the seasonal distribution of the cases. **Results:** The rate of suicide in Peshawar is 0.21 per 100,000 per year. Males were the predominant victims with a male to female ratio of 2.9:1. The age most prone to suicide was 20-29 years followed by 10-19 years. The primary method used for suicide in both sexes was by firearm followed by hanging. The head was the region of the body used for suicide in 59.37% of firearm victims followed by the chest and the abdomen. Two peaks were noted in the months of September and March. **Conclusion:** The incidence of suicide in Peshawar is amongst the lowest in the world.

INTRODUCTION

Suicide is "the intentional act of self destruction committed by someone knowing what he is doing and knowing the probable consequences of his action."¹

Suicide is one of the ten leading causes of death in the world, accounting for more than 400,000 deaths annually². For every person who commits suicide there are 40-50 who seriously consider committing suicide³.

The variability in the incidence and pattern suicide indifferent societies depends on cultural, religious and social values². Suicide is high in societies that are socially isolated, mobile and disorganized and is lower in subcultures whose religious or cultures mores proscribe suicide¹. Social ecological studies indicate that suicide is high in areas that have high rates of juvenile delinquency, adult criminality and homicide in particular¹. The pace and mode of urbanization and industrial development leading to increasing detachment of the individual from his social setup also increases the risk of suicide¹. Other reasons offered to explain high suicide rates are rapid social and cultural change, poverty, geographic isolation, social and economic marginalization, cultural suppression and political disempowerment in addition to childhood separation and loss, alcohol abuse and dependence, personal or family mental health problems and exposure to self destructive behavior by others⁴.

This study was conducted on all cases of suicide autopsied at the department of forensic medicine, Khyber Medical College Peshawar during a ten-year period from 1991 to 2000. The objective was to see the incidence of suicide, the gender and age groups involved, the methods used for committing the act and to note seasonal trends if any. Studies of this sort can be used to develop the social structure of societies in a manner that is less prone to suicide.

MATERIALS & METHODS

All 39 cases of deaths labeled as suicide on the basis of autopsy findings, police inquest and interview with relatives of the victim were selected from the autopsies conducted at the department of forensic medicine Khyber Medical College Peshawar during the last decade of the preceding century i.e. 1991 -2000. The cases were grouped on the basis of age, sex, method of suicide used, region of the body involved and the seasonal distribution of the cases.

RESULTS

The study showed 39 cases of suicide out of a total of 6489 cases autopsied during the decade 1991 -2000. The year 2000 showed the highest number of suicides with nine cases reported. Considering the mean population of Peshawar of 1853275 during the study period, this comes out to a rate of 0.21 per 100,000 per year.

Males were the predominant victims with a male to female ratio of 2.9:1 The age most prone to suicide was 20-29 years with 46.15% of the total cases followed by 10-19 years accounting for 30.76% of suicides. This was true in both genders. In females these were the only age groups in which suicide was reported.

| Year | Male | Females | Total |
|--------------|-----------|-----------|-----------|
| 1991 | 0 | 1 | 1 |
| 1992 | 2 | 3 | 5 |
| 1993 | 2 | 0 | 2 |
| 1994 | 2 | 0 | 2 |
| 1995 | 3 | 0 | 3 |
| 1996 | 4 | 1 | 5 |
| 1997 | 2 | 2 | 4 |
| 1998 | 2 | 1 | 3 |
| 1999 | 4 | 1 | 5 |
| 2000 | 8 | 1 | 9 |
| Total | 29 | 10 | 39 |

| Age Group (Yrs) | Male | Females | Total |
|-----------------|------|---------|-------|
| 0-9 | 0 | 0 | 0 |
| 10-19 | 8 | 4 | 12 |
| 20-29 | 12 | 6 | 18 |

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| | | | |
|--------------|-----------|-----------|-----------|
| 30-39 | 6 | 0 | 6 |
| 40-59 | 2 | 0 | 2 |
| 50-59 | 1 | 0 | 1 |
| 60-69 | 0 | 0 | 0 |
| > 70 | 0 | 0 | 0 |
| Total | 29 | 10 | 39 |

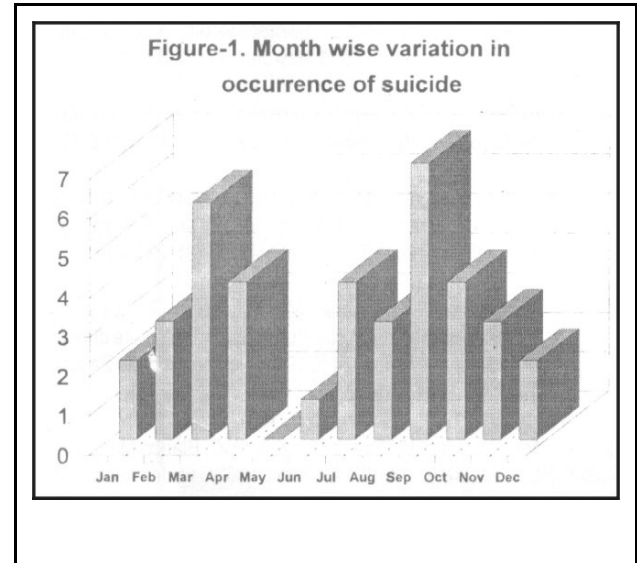
The primary method used for suicide in both sexes was by firearm followed by hanging and a solitary case of self-immolation during the study period. Firearms were used by 82.75% of male victims while females committed suicide by firearm in 80% of cases.

| Methods | Male | Females | Total |
|--------------|-----------|-----------|-----------|
| Firearm | 24 | 8 | 32 |
| Hanging | 4 | 2 | 6 |
| Flame | 1 | 0 | 1 |
| Total | 29 | 10 | 39 |

| | |
|------------|----|
| Head | 19 |
| Neck | 2 |
| Chest | 7 |
| Abdomen | 6 |
| Upper Limb | 0 |
| Lower Limb | 0 |

The head was the region of the body used for suicide in 59.37% of firearm victims followed by the chest in 21.87% and the abdomen in 18.75%. In two cases the victims shot themselves more than once (twice in both cases).

Two peaks were noted in the months of September and March when considering the month wise variation in occurrence of suicide during the decade under study.



DISCUSSION

Suicide is a leading cause of death in the world. The incidence exhibited in our study is amongst the lowest in the world. Similar low incidences have been reported in other parts of Pakistan⁵ and in studies in Jordan⁶, Nigeria⁷ and Malaysia². This contrasts with the high suicide rate reported in studies on population subgroups in U.S.A.^{8,9}, U.K.¹⁰, Switzerland¹¹, Spain¹², China¹³ and Singapore¹⁴.

The reasons for the low incidence in Peshawar could be the fact that the religious and cultural beliefs strictly prohibit suicide, there is a low level of urbanization and industrial development, the degree of social isolation and disorganization is small, rarity of alcohol abuse and dependence and low levels of mental health problems, all of which have been described as factors making a society less prone to suicide¹⁴.

The higher rate of suicide in males determined in our study is in agreement with other studies in Pakistan^{5,16,17} and this trend has been reported in other studies worldwide^{7,8,10,11,12,18,19,20,21,22,23}.

About 77% suicides in our study occurred between the ages of 10-29 years. The occurrence decreased with age. No cases were reported above 60 years. A very striking finding was that in females no suicides were reported above 30 years of age during the entire decade. This age of predilection is similar to other studies in Pakistan^{5,16,17} and other less developed countries^{6,7,8,19} but goes against the position reported in the more developed nations of the world^{9,14,20,21,22,24,25} where suicides occur in the higher age bracket.

The high rate in the above reported age groups could be because this is an age of high sentiments where people are prone to take drastic steps in response to domestic conflicts. It is an age where the young ones are not as yet settled in life either in the economic or social spheres and the pressures of settling down make them vulnerable to extreme steps. Another factor could be that the practice of religion is relatively less in this age group and the belief systems are not fully mature. The total absence of suicides in females above thirty could be explained by the fact that this is an age by which females in Peshawar usually get settled in life and their priorities shift from self to family and children and there is thus a transgression from heart to head, from emotions to realities.

The use of a firearm for committing suicide in over 80% of cases in both genders was an expected finding considering the high level of firearm possession in Peshawar as such a weapon is commonly available in most households. This is in agreement with other parts of the world having easy access to firearms like U.S.A (13,29,30,31,32) and South Africa (30), but contrasts with the general trend in most parts of the world where hanging and poisoning form the major methodologies used for suicide^{11,12,16,18,19,21,22,23,24,30,31} as has also been reported in Pakistan¹⁷.

The preference for shooting oneself in the head region found in our study is in agreement with the accepted trend^{7,32}.

The high occurrence of suicide during the changing of seasons is also reported by others^{1,11}

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