Original Article

Factors for Suicidal Attempts

Identification of Various Factors for Suicidal Attempts in Patients Coming to a Tertiary Care Hospital of Southern Punjab

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ABSTRACT

Objective: The objective of this study is to determine the factors predisposing to attempt a suicide using poisons in our community.

Place and Duration of Study: This study was conducted at the Medical units, Nishtar Medical University and Hospital, Multan, from August 2019 to February 2020.

Materials and Methods: A total of 150 patients of both genders, aged 14 to 70 years and with attempted suicide using poisons were enrolled. The socio-demographic information was obtained. Poisoning agent used and knowledge about effects of poisoning agents were obtained. Outcome was measured in the form of hospital stay and discharge or expired. The data was entered into SPSS version 26.0 and analyzed accordingly.

Results: Out of a total of 150 patients, there were 88 (58.7%) female. Mean age was noted to be 23.87±7.6 years while most of the patients, 70 (46.7%) were aged between 21 to 30 years. There were 71 (47.3%) cases who had marital status as married while out of these 71, 41 (56.3%) were unsatisfied with their marital life. Employment status of the 122 (81.3%) study participants was unemployed. Most of the study participants, 104 (69.3%) were literate. Social unrest was reported by 117 (78.0%). Paraphenylene Diamine (PPD) was the commonest form of poison used followed by pesticides in 59 (39.3%) and 33 (22.0%) respectively. Mean duration of hospital stay was recorded as 4.27±3.5 days. In terms of outcome, 132 (88.0%) patients were discharged after treatment while 18 (12.0%) expired.

Conclusion: Females form majority of cases attempting suicides. Younger age groups are more commonly involved attempting suicides. Paraphenylene Diamine was the commonest form of poison used followed by pesticides. Social, family and peer related issues are important factors behind suicide attempts.

Key Words: Suicide, paraphenylene diamine, pesticides

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INTRODUCTION

Suicide is the act of intentionally causing one's own death.[1] Mental disorders, including depression, bipolar disorder, schizophrenia, personality disorders, and substance abuse including alcoholism and the use of benzodiazepines are some of the commonest risk factors for suicidal attempts.[2,3] Some suicides are impulsive acts due to stress, such as from financial difficulties, troubles with relationships, or bullying.[4]

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World Health Organization estimated around 800000 people to die annually as result of suicides which means every 40 seconds someone is committing suicide somewhere in the world.[5] Young people are more commonly involved in acts of attempting suicides.[6] Around 30% of global suicides are due to pesticide self-poisoning, most of which occur in rural agricultural areas in low- and middle-income countries consisting in about 80% world population; some of these pesticides are forbidden by United Nations (UN) conventions.[7] In high-income countries consisting of the remaining 20% world population, the most common methods are firearms, hanging and other self-poisoning. Europe is the most suicidal region in the entire world, while the Eastern Mediterranean the least.[8,9]

Pakistan's suicide rate is below the worldwide average. Pakistan's death rate, as given by the World Bank, is 7.28 per 1000 people in 2016 (the lowest rate in the 2006-2018 period). In 2015, the crude suicide rate in Pakistan was approximately 2.1 deaths per 100,000 inhabitants, one fifth the global average.[10] Suicides represent around 0.3% of all deaths.

There are several groups of people who make suicide attempts. One group includes those individuals with acute situational problems like acutely distressed by a break-up in relationship or another type of disappointment. Another group includes individuals with severe depression which may be due to conditions such as medical illnesses (eg; AIDS) or comorbid psychiatric disorder like Panic disorders. [11,12]

Muslim scholars and clerics consider suicide forbidden. A verse in the Quran instructs: "And do not kill yourselves, surely God is most Merciful to you."[13] The prohibition of suicide has also been recorded in statements of hadith (sayings of Muhammad); for example: Narrated Abu Huraira: The Prophet said, "He who commits suicide by throttling shall keep on throttling himself in the Hell Fire (forever) and he who commits suicide by stabbing himself shall keep on stabbing himself in the Hell-Fire."[14]

We planned this study to determine the factors which predispose a person to commit suicide using poisons despite knowing that it is forbidden in Islam and also to determine whether the act was impulsive or it was already planned.

MATERIALS AND METHODS

This observational Cross sectional study was conducted in Medical units, Nishtar Medical University and Hospital, Multan, from August 2019 to February 2020. Approval from Institutional Ethical Board was taken for this study. Informed consent was taken from all study participants or from their guardians.

A total of 150 patients of both genders, aged 14 to 70 years and with attempted suicide using poisons were enrolled. Patients presented with accidental poisoning, or homicidal poisoning, non-Muslim patients, patients having history of suicidal attempts, having any psychiatric illnesses or those with history of addiction were excluded.

The demographic information (age, sex, marital status, residential area, occupation, socio-economic status, knowledge about suicide prohibition in Islam) were obtained from all the patients. Knowledge about effects of poisoning agents was obtained. Outcome was measured in the form of hospital stay and discharge or expired. All the information was collected through a specially designed proforma.

The data was entered into SPSS version 26.0 and analyzed accordingly. Quantitative data like age and hospital stay were presented as mean and standard deviation. Qualitative date like gender, socioeconomic status, occupation, effect and availability of poison were calculated as frequencies and percentages.

RESULTS

Out of a total of 150 patients, there were 88 (58.7%) female. Mean age was noted to be 23.87$\pm$7.6 years while most of the patients, 70 (46.7%) were aged between 21 to 30 years. There were 144 (96.0%) patients who had the knowledge that Islam prohibits suicide. Inter-personnel communications were the most frequent source of knowledge about the poison, noted in 118 (78.7%) patients. Table 1 shows demographic and basic characteristics of study participants.

Table No.1: Demographic and Basic Characteristics of Study Participants

Demographic and Basic Characteristics		Number (%)
Gender	Male	62 (41.3%)
	Female	88 (58.7%)
Age (years)	≤20	60 (40.0%)
	21-30	70 (46.7%)
	>30	20 (13.3%)
Knowledge about Islam's Prohibition about Suicide	Yes	144 (96.0%)
Family History of Suicide Attempts	Yes	55 (36.7%)
Knowledge about effects of Poison	Yes	25 (16.7%)
Source of Knowledge about the Poison	Electronic Media	9 (6.0%)
	Print Media	23 (15.3%)
	Inter-Personnel Communications	118 (78.7%)

Table 2 represents socio-economic characteristics of the study participants. Most of the patietns had residential status as urban 81 (54.0%). There were 71 (47.3%) cases who had marital status as married while out of these 71, 41 (56.3%) were unsatisfied with their marital life. Employment status of the 122 (81.3%) study participants was unemployed. Most of the study participants, 104 (69.3%) were literate. Social unrest was reported by 117 (78.0%). Table 3 highlights peer related pressure among study participants.

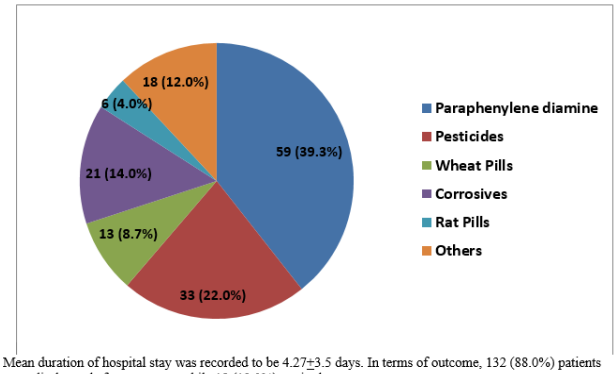
Table No.2: Socio-Economic Characteristics of Study Participants

Socio-Economic Characteristics		Number (%)
Residential Status	Urban	81 (54.0%)
	Rural	69 (46.0%)
Marital Status	Single	77 (51.3%)
	Married	71 (47.3%)
	Divorced/Widow	2 (1.3%)
Satisfied with Marital Life (n=71)	Yes	31 (43.7%)
	No	41 (56.3%)
Employment Status	Employed	28 (18.7%)
	Un-employed	122 (81.3%)
Educational Status	Literate	104 (69.3%)
	Illiterate	46 (30.7%)
Socio-economic Status	Lower	93 (62.0%)
	Middle	56 (37.3%)
	High	1 (0.7%)
Family Status	Nuclear	72 (48.0%)
	Joint	78 (52.0%)
Social Unrest		117 (78.0%)

Table No.3: Peer Related Pressure Among Study Participants

Peer Related Characteristics	Number (%)
Peer Pressure in Education	36 (24.0%)
Peer Pressure in Office/Job	23 (15.3%)
Peer Pressure in Income/Business	82 (54.7%)

Figure 1 is highlighting different agents used as poison for suicidal attempt by the patients. Paraphenylene Diamine (PPD) was the commonest form of poison used followed by pesticides in 59 (39.3%) and 33 (22.0%) respectively. There were 141 (94.0%) patients who used readily available poisons for suicidal attempts.



Mean duration of hospital stay was recorded to be 4.27±3.5 days. In terms of outcome, 132 (88.0%) patients were discharged after treatment while 18 (12.0%) expired

Figure No.1: Agent used as Poison for Suicidal Attempt

DISCUSSION

In South Asia, suicide is considered to be a major issue as most of the deaths occur without labeling any cause or medical certification. Suicides are commonly reported by family members while many do not wish to share much about the suicide details fearing stigma or embarrassment. People from different parts of the world tend to choose specific methods for suicidal attempts like data from Hong Kong revealed that jumping from the buildings is quite frequent there.[15] In the recent decades, suicide rates have risen especially among developing nations while whatever data is on view about the rates and causes of suicides, it is not reliable. Identification of the suicide is not easy because of ineffective civil registration protocols. Regional data shows incidence of suicide to range between 10-12 per 100000.[16] Data from Sri Lanka showed high incidence of Suicides to be 30 per 100000 while China and Japan has suicide rates between 10 to 29 per 100000. Data from Middle Eastern countries like Egypt and Jordan has low incidence of suicide as less than 10 per 100000.[17]

In this study, 88 (58.7%) cases comprised of female. Our findings showing female predominance among cases with suicidal attempts are consistent with many other local and regional studies.[18] Overall, mean age was noted to be 23.87±7.6 years in this research while most of the patients, 70 (46.7%) were aged between 21 to 30 years. Imtiaz F et al from Karachi noted that cases with suicidal attempts were aged between 14-22 years.[19] Data from Thailand noted age between 15-24 as the most frequent among cases reported with suicide attempts.[20] Contrary to our findings, one study from India revealed that older age groups were more commonly found among cases doing suicide attempts.[21]

In the present work, PPD was the commonest form of poison used followed by pesticides in 59 (39.3%) and 33 (22.0%) respectively. Chemical poisoning is found to be the most common mode of suicide agents in our parts of the world.[19,22] Family unrest and unsatisfactory married life were some of the important reasons highlighted in the present study. Previous local data has revealed that women are more prone to attempt suicides as compared to men while family problems along with domestic violence are very important reasons.[19]

To minimize the burden and stigma of suicide, measures should be taken at national level to form strong social interaction. As suicide is prohibited in Islam, its religious and social repercussions needs to be addressed. Electronic and print media can be so helpful in resonating the effects of suicide in the families and communities. General public awareness programs should also be conducted at mass levels to address strong issues behind suicide attempts.

CONCLUSION

Females form majority of cases attempting suicides. Younger age groups are more commonly involved attempting suicides. Paraphenylene Diamine was the commonest form of poison used followed by pesticides. Social, family and peer related issues are important factors behind suicide attempts.

Author's Contribution:

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Final Approval of version:	Kaleem ullah Qaisrani

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

1. Kosaraju SK, Vadlamani LN, Mohammed Bashir MS, Kalasapati LK, Rao GL, Rao GP. Risk factors for suicidal attempts among lower socioeconomic rural population of telangana region. Ind J Psychol Med 2015;37(1):30-35.
2. Ostergaard MLD, Nordentoft M, Hjorthøj C. Associations between substance use disorders and

suicide or suicide attempts in people with mental illness: a Danish nation-wide, prospective, register-based study of patients diagnosed with schizophrenia, bipolar disorder, unipolar depression or personality disorder. Addiction 2017;112(7):1250-1259.
3. Nordentoft M. Prevention of suicide and attempted suicide in Denmark. Epidemiological studies of suicide and intervention studies in selected risk groups. Dan Med Bull 2007;54(4):306-69.
4. Bilsen J. Suicide and Youth: Risk Factors. Front Psychiatr 2018;9:540.
5. World Health Organization. Adolescent Health, 2018. (Accessed on 12th February 2016) Available from URL:http://www.who.int/topics/ adolescenthealth/en/
6. Statista, the Statistics Portal. 2018. Percentage of college students in the U.S. that were receiving mental health services and had seriously considered suicide from 2010 to 2017. (Accessed on 12th February 2016) Available from URL:https://www.statista.com/statistics/827344/suicidal-thoughts-among-college-students-receiving-mental-health-services-us-by-year/
7. Restrict pesticides to reduce suicides: WHO. World Health Organization. August 2017.
8. Amini S, Bagheri P, Moradinazar M, Basiri M, Alimehr M, Ramazani Y. Epidemiological status of suicide in the Middle East and North Africa countries (MENA) from 1990 to 2017. Clin Epidemiol Glob Health 2021;9:299-303.
9. Jaffe DH, Rive B, Denee TR. The burden of suicidal ideation across Europe: a cross-sectional survey in five countries. Neuro Psychiatr Dis Treat 2019;15:2257-2271.
10. Pakistan Death rate - data, chart. The Global Economy.com. Retrieved 2019-01-04.
11. Bazrafshan MR, Sharif F, Molazem Z, Mani A. Exploring the risk factors contributing to suicide attempt among adolescents: A qualitative study. Iran J Nurs Midwifery Res 2016;21(1):93-99.
12. Bhatt M, Perera S, Zielinski L. Profile of suicide attempts and risk factors among psychiatric patients: A case-control study. PLoS One 2018;13(2):e0192998.
13. Qur'an, Sura 4 (An-Nisa), ayat 29.
14. Sahih al-Bukhari, 2:23:446
15. Chung WS, Leung CM. Carbon monoxide poisoning as a new method of suicide in Hong Kong. Psychiatr Serv 2001;52:836-837.
16. Gridhar S, Dogra AT, Leenars A. Suicide in lndia 1995-1999. Arch suicide Res 2003;7:389-93.
17. Khan MM. Suicide prevention and developing countries. J R Soc Med 2005;98:459-463.
18. World Health Organization. Preventing suicide: a global imperative. World Health Organization, 2014. http://apps.who.int/iris/bitstream/10665/131056/8/9789241564878_eng.pdf?ua=1&ua=1 Accessed 15 Jan 2017.
19. Imtiaz F, Ali M, Ali L. Prevalence of chemical poisoning for suicidal attempts in Karachi, Pakistan. Emerg Med (Los Angel) 2015; 5(3):1000247.
20. Lotrakul M. Suicide in Thailand during the period 1998-2003. Psychiatr Clin Neurosci 2006;60: 90-95.
21. Joseph A, Abraham S, Muliyil JP, George K, Prasad J, Minz S, et al. Evaluation of suicide rates in rural India using verbal autopsies, 1994-9. BMJ 2003;326(7399):1121-1122.
22. Bose A, Konradsen F, John J, Suganthy P, Muliyil J, Abraham S. Mortality rate and years of life lost from unintentional injury and suicide in South India. Trop Med Int Health 2006;11(10): 1553-1556.