IASP Special Interest Group (SIG) on the Prevention of Intentional Pesticide Poisoning

Bibliography: Topic - Suicide and Self Harm

BACKGROUND: Knowledge concerning the epidemiology of suicide in Sri Lanka is limited despite its suicide rates being amongst the highest in the world. AIM: To examine the characteristics of a large sample of Sri Lankan suicides to inform approaches to prevention. METHOD: Psychological autopsy study of suicides occurring in three rural districts of Sri Lanka during August-October 1997. RESULTS: Interviews were conducted with contacts of 372 (74%) of the 499 suicides that occurred over the study period. Males accounted for 79% of the deaths. Twenty-one percent of male and 57% of female suicides were aged <25 years of age. Pesticide self-poisoning accounted for 259 (70%) of the deaths. Almost two-thirds (62%) of the deaths occurred in hospital and 95 (26%) had made previous suicidal gestures. 138 (37%) were moderately or severely depressed and 144 (49%) of male suicides, but only 2 (2.5%) of the females, were alcohol dependent. Illegally brewed alcohol (kasippu) was the main product used by two thirds (62%) of problem drinkers. There was a family history of suicide in 20% of cases. CONCLUSION: Pesticide self-poisoning accounts for over two thirds of suicides in rural Sri Lanka. Suicide prevention efforts in Sri Lanka should focus on restricting access to pesticides, improving the medical management of pesticide poisoning, reducing alcohol misuse-particularly targeting the supply of illegal alcohol-and improving the identification and aftercare of people who self-harm.


OBJECTIVE: To study the characteristics of suicide attempters attending the main general hospital in Fiji Islands. METHOD: Consecutive suicide attempters were clinically evaluated, and their sociodemographic and clinical characteristics were compared with those of other patients seen in the psychiatric service between January 15, 1999 and January 14, 2000. RESULTS: Thirty-nine suicide attempters were seen, representing 36.8% of all the cases referred to the psychiatric service. The prevalence of attempted suicide in the Greater Suva Area was 34.8 per 100,000. Majority (56.4%) were young (16-25 years), Indians (59%), female (61.5%), students (41%), never married (74.4%) and of Hindu faith (48.7%). The commonly used methods were ingestion of drugs and pesticides. The intention to die was present in 20 (51.3%) of the population. Social problems and/or psychiatric comorbidity were present in over 60% of cases. Suicide attempters were significantly younger, more of single persons (P<.0001), and fewer were in employment (P<.001) than nonsuicidal cases seen. The difference was not significant when the two groups were compared regarding gender, race or religion. CONCLUSIONS: Young people attempt suicide in disturbed psychosocial milieu, using available poisoning methods with strong desire to die. Apparently, high proportion of female Indians in this group reflects high rate of service utilization by them. Unemployment is an insignificant predisposing factor.

**OBJECTIVE:** This study examined the prevalence and the characteristics of deliberate self-poisoning patients seen at the main general hospital in the Fiji Islands. **METHOD:** Thirty-one consecutive patients with deliberate drug-overdose and 27 others with nonoverdosed self-poisoning were compared on sociodemographic and clinical variables. **RESULTS:** Deliberate self-poisoning cases represented 0.3% of the hospital admissions, and had a rate of 25.9 per 100,000 population. The overdose group was significantly older (P<.05), whereas the poison-ingestion group had significantly greater proportion of males (P<.03). The rate of psychiatric morbidity was significantly higher in the overdose group (P=.04), whereas the history of alcohol abuse was significantly higher in the other group (P=.04). Paracetamol (35.5%) and paraquat (29.7%) were the most commonly used agents. **CONCLUSIONS:** Age, gender, rate of psychiatric morbidity, or history of alcohol abuse could be predictive of whether drug overdose or poison ingestion would be used for deliberate self-poisoning. This information could be relevant in the formulation of suicide preventive strategies.


**OBJECTIVE:** To examine the clinical epidemiology, including case fatality and determinants of self-harm in six island blocks of the Sundarban region of West Bengal, India. **METHODS:** We examined the clinical records of 1277 patients admitted for deliberate self-harm (DSH) to the six island hospitals from 1999 to 2001. **RESULTS:** 77.7% of the patients survived their attempt, 11.9% died and for 10.4% the outcome was not recorded. Women accounted for 65.2% of the DSH admissions and 67.1% of the deaths. Pesticides were the most commonly used means (68.7%). The case fatality of self-harm reported in these hospitals ranged from 8.0% to 50.0% (mean 13.3%; CI, 11.3-15.3). The age group 55-64 years was at highest risk of death, the age group 15-24 years at lowest risk. Higher lethality of pesticide ingestion compared to other methods was suggestive but not significant. Case fatality within the region varied but was high compared to industrialized nations. Case records and management of DSH were poor. **CONCLUSION:** Effective DSH prevention in the Sundarban region would require better surveillance at clinical facilities and an intersectoral approach, linking the agricultural interests of pesticide safety and mental health interests for preventing DSH.


**Background/Purpose:** Few studies have compared methods of suicide used by women in different countries. This study compared methods used by women in South Korea, Taiwan, Sweden and the United States. **Methods:** Age- and method-specific suicide rates for women in the four countries in
2002 were calculated and compared. Hanging, firearms and jumping from a height were classified as violent suicide methods. Poisoning suicides were further classified according to use of drugs, gases, pesticides and other agents. Results: Half of Taiwanese and American women used violent methods, while only one third of women in South Korea and Sweden used such methods. Poisoning was the most often used suicide method by women in all four countries. About 90% of American and Swedish women used drugs. In contrast, almost half of women from Korea and Taiwan used pesticides. Conclusion: Different countries contrast greatly in the agents used in suicide by poisoning but not in patterns of violent methods used. 2009 Elsevier & Formosan Medical Association.


**BACKGROUND:** Deliberate self-harm is a challenging public health issue but there is a paucity of data on non-fatal deliberate self-harm in the literature. We aimed to understand the behaviour of deliberate self-harm, both fatal and nonfatal, in a primary care setting. **METHODS:** A year-long prospective study of all admitted patients of deliberate self-harm at 13 block primary health centres of the Sundarban region was done to examine the sociodemographic profile and clinical outcome of suicidal behaviour. Data were collected by using an especially devised deliberate self-harm register. Each subject was administered a 20-item case history sheet by trained medical officers and nursing staff. **RESULTS:** A total of 1614 deliberate self-harm subjects (619 men, 995 women) were admitted during the year, of whom 143 (62 men, 81 women) died. Although women, especially in the younger age groups, constituted the majority of subjects (61.6%), the fatality trend was higher among men than among women (10% v. 8.1%). Poisoning was the commonest (98.4%) method of self-harm, particularly using pesticide. Easy availability of pesticides was a risk factor. Psychosocial stressors, such as conflict with spouse, guardian or in-laws, failed love affairs and economic distress, were the common underlying reasons. The majority of acts of deliberate self-harm (92.6%) were committed inside the home, especially by women. Only a small proportion of subjects had a past or family history of attempt at deliberate self-harm. The overall incidence of fatal and non-fatal deliberate self-harm was 5.98 and 61.51 per 100 000 population, respectively. **CONCLUSION:** Both fatal and non-fatal pesticide-related deliberate self-harm is a major public health issue in the Sundarban region. An intersectoral approach involving primary health, administration and agriculture may help in developing an effective preventive programme to reduce the morbidity and mortality from deliberate self-harm.

Deliberate self-harm is a major public health problem. This study is aimed to examine the sociodemographic characteristics of both non-fatal and fatal deliberate self-harm cases admitted at the 13 block primary health centres of the Sundarbans region under South 24 Parganas district, West Bengal. Retrospective deliberate self-harm data from the admission registers of 13 block primary health centres was collected for the year 1999. A total of 1850 deliberate self-harm cases (639 males and 1211 females) were admitted at the 13 block primary health centres, of which 159 (60 males, 99 females) were fatal (completed suicide). A higher fatality rate for male than female (9.4% compared to 8.2%) was observed. Women (85.5%), especially of younger age groups constituted the major cases. Poisoning (96.9%) was the commonest method of self-harm. Easy availability of pesticides was a common factor. Marital status and seasonal trend (March-April) had important contribution in self-harm incidents. Planned psychosocial intervention as a part of community mental health programme may help to reduce the deliberate self-harm morbidity and mortality at this primary care level.


Objective: Reducing suicide rates by preventing deliberate self-harm is a major concern for community-based mental health policy and programmes. Deliberate self-harm (DSH) by ingestion of pesticides is a frequent phenomenon in agricultural communities. This study examined patterns of morbidity and mortality over a five-year period (1995-1999) associated with DSH and their geographical distribution in Sagar Island of the Sundarban region of West Bengal, India. This study seeks to examine the relationship between DSH and availability of pesticide. Materials and Methods: Retrospective and prospective DSH data collection from the indoor admissions of a rural hospital of Sagar Island. Results: During this period there were a total of 486 cases (180 male and 306 female) of deliberate self-harm by ingestion of toxic substances ascertained from hospital admissions to the Sagar Rural Hospital, Rudranagar, where all such admissions on the island are treated. Among these, 16 males and 48 females died, indicating a higher fatality rate for women (15.6% compared with 8.9%). Demographic features and characteristic familial and other social stressors were also studied. DSH was found to be more frequent in areas where betel leaf vine is the predominant cash crop. Young females were the most frequent demographic group by age and sex to present for treatment of DSH in the government health clinics. Typical stressors included family quarrels, marital discord, dowry-related conflict, and broken love affairs. Conclusion: DSH by agrochemical poisoning is a serious public health issue in the Sundarban islands. Proper attention is called for to how recognition of ecological factors and typical social stressors may indicate ways of reducing morbidity and mortality from DSH in the context of a community mental health programme.

Background. Acts of suicide differ widely in the amount of planning preceding the act. Correlates of completed suicide in China identified in a previous investigation were re-examined to identify those that may be especially relevant to low-planned (impulsive) and high-planned suicidal behavior. The association of planning and method in completed suicide was also assessed. Method. A psychological autopsy study of 505 suicide decedents aged > 18 years sampled to be representative of suicides in China was conducted. Multinomial regression analyses compared three levels of suicide planning (low, intermediate, high). Results. Women and younger individuals were more likely to carry out low-planned and intermediate-planned than high-planned acts of suicide. Greater acute stress distinguished low-planned from high-planned suicides. Ingestion of pesticides stored in the home was a more commonly employed method in low-planned than high-planned suicides. Conclusions. Low-planned suicides are more common in women, in younger individuals, and among those who are experiencing acute stress. Prevention strategies targeted at restricting access to pesticides may preferentially lower the rate of low-planned suicides. 2005 Cambridge University Press.


Objectives: The study aims to determine the incidence of suicide attempt, describe the methods used, and assess use of health care services including mental health care after suicide attempt in a rural area of Vietnam. Methods: All suicide attempters (104) during 2003-2007 were listed, diagnosed and re-evaluated by trained physicians according to the research criteria of the WHO Multicentre Study of Attempted Suicide. All attempters were interviewed by trained medical staff to investigate methods used, socio-demographic characteristics and use of health services. Results: The yearly incidence was 10.2 per 100,000 person-years, 10.6 per 100,000 in males and 9.8 per 100,000 in females. 99% of cases committed suicide attempt by poisoning, 62.6% by pesticides and 36.3% by pharmaceutical drugs. 34.3% reported having been in contact with somatic care and 13.2% had received mental health care. Among those who reported some treatment received, 47.5% had been in contact with official health care services, 8.1% had pharmacy keepers' consultation or were treated by traditional healers and 4% reported self treatment. Conclusion: The incidence of suicide attempt was lower in this population compared to other settings. While the majority of attempters use pesticides, many had used psychotropic drugs. Contact with mental health services following the attempt was very limited in this setting. Suicide prevention for this high risk group should focus on reducing access to pesticides and psychotropic drugs. Mental health services should be made more accessible in rural areas. 2010 Nguyen et al; licensee BioMed Central Ltd.


Objective: The availability of toxic chemicals and of selected pharmaceuticals tends to facilitate suicide acts by poisoning. Therefore, accurate information about chemicals used and mode of exposure are important in order to devise national strategies and programmes for suicide and suicide attempt prevention. In the present study a preliminary characterization of suicide attempts by poisoning in Italy is provided.

Methods: The Poison Control Centre of Milan (PCCM) handles about 60% of all cases referred to the PCCs active in Italy. For each patient examined, the PCCM collects the following information: demographic characteristics; exposure characteristics; clinical effects; therapy; outcomes. The PCCM database was searched to identify all cases with intentional exposure due to suicide attempts occurring in Italy in 2005. Results: In the period under study, the PCCM handled 42,483 new cases of human exposure and about 19% of them (n = 6699) were classified as due to suicide attempts. Among these patients there was an over representation of females (70 vs. 30%). The median age was 35 years (range: 8-95). About 83% of cases were exposed to pharmaceuticals, 14% to non pharmaceuticals, and 8% to both pharmaceuticals and non pharmaceuticals in combination. The route of exposure was mainly ingestion (97%), inhalation (1%) and parenteral (1%). The categories of agents most frequently reported were: sedative/hypnotics antipsychotics (43%), antidepressants (23%), analgesics (13%), anticonvulsants (11%), cardiovascular drugs (7%), and alcohol (7%). The group exposed to agricultural pesticides (1% of cases) was the only one with a higher percentage of men (65 vs. 35%). More than one agent was reported for about 45% of cases. Most of these were exposed to sedative/hypnotics antipsychotics in combination with other drugs (30%), mainly antidepressants (12%) and anticonvulsants (5%). Combined exposure to drugs and alcohol was reported in 6% of cases. Among these, about half were exposed to sedative/hypnotics/antipsychotics. Poisoning severity was low for 46% of cases, moderate for 48%, elevated for 6%. Death was reported in 5 cases.

Conclusion: The observations reported here should be considered as a starting point for further analyses focused on specific chemicals and commercial products.


OBJECTIVE: To explore if recent changes in methods of self-harm in Sri Lanka could explain the decline in the incidence of suicide. METHODS: Time series analyses of suicide rates and hospitalization due to different types of poisoning were carried out. FINDINGS: Between 1996 and 2008 the annual incidence of hospital admission resulting from poisoning by medicinal or biological substances increased exponentially, from 48.2 to 115.4 admissions per 100,000 population. Over the same period, annual admissions resulting from poisoning with pesticides decreased from 105.1 to 88.9 per 100,000. The annual incidence of suicide decreased exponentially, from a peak of 47.0 per 100,000 in 1995 to 19.6 per 100,000 in 2009. Poisoning accounted for 37.4 suicides per 100,000 population in 1995 but only 11.2 suicides per
100,000 in 2009. The case fatality rate for pesticide poisoning decreased linearly, from 11.0 deaths per 100 cases admitted to hospital in 1997 to 5.1 per 100 in 2008. CONCLUSION: Since the mid 1990s, a trend away from the misuse of pesticides (despite no reduction in pesticide availability) and towards increased use of medicinal and other substances has been seen in Sri Lanka among those seeking self-harm. These trends and a reduction in mortality among those suffering pesticide poisoning have resulted in an overall reduction in the national incidence of accomplished suicide.


In an attempt to identify at risk individuals, we analysed available information for individuals who committed suicide in Blantyre, Malawi. A retrospective audit of suicides autopsied at the Queen Elizabeth Central Hospital and the University of Malawi College of Medicine mortuaries between January 2000 and December 2003 was analysed by age, sex, residential location, and mode of suicide. Eighty-four suicide cases (65 males, 19 females) represented 17% of all autopsies. The major mode of suicide in Blantyre was chemical poisoning using an agricultural pesticide, accounting for 66 cases (78%)-49 males (76%), 17 females (89%). There were no cases of poisoning by therapeutic medicines, self-immolation or incised wounds. The majority of cases were from one major urban area, Limbe, and one peri-urban area, Chileka. The demographics of suicide in Malawi differ from those reported for other African countries (e.g., lower proportion of females, no use of therapeutic medicine in poisoning, few gunshots). This audit highlights a need for investigations into the sale and use of agricultural pesticides. A prospective study of social and demographic factors around suicide should be undertaken to target groups at highest risk.


INTRODUCTION: Deaths from suicide reached a peak in Sri Lanka in 1995. Several interventions reduced the suicide rate of 48.7 per 100,000 in 1995 to 23 per 100,000 in 2006, though it is still a major socioeconomic problem. All suicides have to be reported to the Inquirer of Sudden Death (ISD) or 'Coroner', according to the Criminal Procedure Code. METHOD: All deaths where a verdict of 'suicide' was given after an inquest at the Coroner's Court, Colombo, in 2006 were studied. Close relations or friends who attended the inquest were interviewed by medically qualified research assistants. Age, sex, marital and occupational status, level of education, living circumstances
and method and reasons for the suicide were studied. RESULTS: During 2006, 151 deaths from suicide were documented, of which 93 (62%) were men. The majority (47%) were aged between 20 and 29 years. One-third of the victims was unemployed. At the time of committing suicide, 75% were living with family; 89 (59%) were married and 46 (31%) were single. Poisoning was the cause of death in 66 (44%), 48 (70%) of which were due to pesticides. Burns caused 51 (34%) deaths. Other common causes of death included hanging (11%), jumping in front of a train (7%) and drowning (3%). The commonest reason for suicide was dispute with the spouse/marital disharmony (30%). Other reasons were dispute with parents (8%), financial matters (7%), organic diseases (7%), alcoholism (7%), psychiatric illnesses (6%) and disputes in love affairs (5%). In 29 cases (19%), no definite reason for the suicide was evident. DISCUSSION: Self-poisoning and self-immolation were the commonest methods used to commit suicide. Marital disharmony was the main reason (30%). Psychiatric illnesses were responsible for only 6%. Future interventional activities should include secure access and restriction of the availability of pesticides and drugs, empowering people to manage anger and conflicts, and recognition and treatment of alcoholism and psychiatric illnesses. The success story of the reduction in the incidence of suicides in Sri Lanka should be a lesson to many developing countries where suicide is a major socioeconomic and health issue.


BACKGROUND: The objective was to describe patients presenting themselves at emergency-care settings following a suicide attempt in eight culturally different sites (Campinas (Brazil), Chennai (India), Colombo (Sri Lanka), Durban (South Africa), Hanoi (Viet Nam), Karaj (Iran), Tallinn (Estonia), and Yuncheng, (China)]. METHOD: Subjects seen for suicide attempts, as identified by the medical staff in the emergency units of 18 collaborating hospitals were asked to participate in a 45-minute structured interview administered by trained health personnel after the patient was medically stable. RESULTS: Self-poisoning was the main method of attempting suicide in all eight sites. Self-poisoning by pesticides played a particularly important role in Yuncheng (71.6% females, 61.5% males), in Colombo (43.2% males, 19.6% females), and in Chennai (33.8% males, 23.8% females). The suicide attempt resulted in danger to life in the majority of patients in Yuncheng and in Chennai (over 65%). In four of the eight sites less than one-third of subjects received any type of referral for follow-up evaluation or care. CONCLUSIONS: Action for the prevention of suicide attempts can be started immediately in the sites investigated by addressing the one most important method of attempted suicide, namely self-poisoning. Regulations for the access to drugs, medicaments, pesticides, and other toxic substances need to be improved and revised regulations must be implemented by integrating the efforts of different sectors, such as health, agriculture, education, and justice. The care of patients who attempt suicide needs to include routine psychiatric and psychosocial assessment and systematic referral to professional services after discharge.

Suicide mortality in a Northern town of Sri Lanka for the year 1982 is examined. The rate was 52.5 per 100,000 general population and shows an increasing trend amongst the 15-34 age group. The commonest method was self-poisoning by agrochemicals and insecticides of organophosphorus type. Psychiatric diagnosis, social, economic and political factors are presented. Easy availability of dangerous agrochemicals and rapid social and political changes appear to be of equal importance in producing a high rate of suicide.


BACKGROUND: Suicide is a major public health concern. This investigation assessed elderly patients treated for self-intoxication in a poisoning referral center. METHODS: A retrospective and descriptive study was performed from the point of view of demographic, psychiatric and clinical factors related to the self-poisoning for suicide attempts in subjects aged over 65 years. RESULTS: The examined population consisted of 43 subjects including 30 males and 13 females with an age of 65 to 83 years (mean age = 72.5 years in males and 73.5 years in females). The majority of subjects were retired [35(81.4%)] and, many cases lived with their family [39(90.6%)]. 27.9% of subjects had been undergoing psychiatric treatment. Depressive disorders (reactive) and endogenic depression (affective) were recognized in 8 subjects (66.7%). 51% suffered from chronic diseases including hypertension (33.3%), coronary artery decease (30.4%), chronic obstructive pulmonary disease (15.9%) and diabetes (10.1%). Two cases had a history of previous suicidal attempt. The most frequently used substances in the attempts were medications (58%), opioids (23.2%), pesticide (11.6%) methanol (4.6%) and hair remover (2.3%). The mean duration of hospitalization was 1.3 days. CONCLUSIONS: The high rate of depression and chronic diseases in elderly with suicidal attempt necessitates preventive interventions.


Aim: The aim of this study was to analyze the epidemiological issues related to suicide in Ecuadorians. Subject and methods: This is an observational, descriptive, and epidemiological study. The data used in this study arise from the National Institute of Statistics and Censuses register. The study analyzed gender, sex, and method used in suicide and undefined cases. Results: Every year in Ecuador 801 individuals die by suicide, with a prevalence rate (PR) of 60.55 deaths per million population (pmp). Suicide is the cause of 1.4% of all deaths in Ecuador. By gender, men account for 70.96% (PR=42.49 pmp), while the percentage in women is only 29.04% (PR=17.58 pmp). The male to female ratio is ~2:1; 76.79% of all the cases involved individuals between 15 and 50 years of age. The most common method of suicide is hanging, strangulation, or suffocation (44.35%), followed by unspecified chemicals (20.37%) and pesticide poisoning (20.07%). Every year in Ecuador 352.6 individuals die by unspecified events or undetermined intents. These events could be a source of hidden suicides. By gender, men
account for 76.39% (PR=20.35 ppm). The male to female ratio is ~3:1. Conclusion: Suicide in Ecuador has increased in a constant and progressive way, even though there is major underreporting of these cases. The main method to commit suicide was hanging followed by pesticide poisoning. Suicide prevalence rates were similar to neighboring countries in South America, with the exception of Uruguay. Unspecified events or undetermined intents could be a source of hidden suicides, a fact that needs further analysis. Springer-Verlag 2010.


Gunnell, D. and G. Lewis (2005). "Studying suicide from the life course perspective: Implications for prevention," British Journal of Psychiatry 187 (SEPT.): 206-208. Suicide is an important contributor to premature mortality accounting for over 800,000 deaths worldwide every year. Environmental and genetic factors acting from before birth to old age affect an individual's risk of suicide. Risk is influenced not only by psychiatric illness and impulsive behaviour but also by factors such as the cultural acceptability of suicide, the ease of availability of lethal suicide methods, help-seeking behaviours in times of crisis and access to effective treatments following self-harm. Suicide prevention programmes might usefully focus on two discrete areas: the prevention of the psychiatric illnesses that precede suicide and tackling those risk factors particular to suicide such as media influences, help-seeking, the availability of methods and the medical management of self-harm.


BACKGROUND: Whereas German suicide rates had a clear decreasing tendency between 1991 and 2006, they increased from 2007 to 2010. Deeper analyses of suicide data might help to understand better this change. The aim of this study was to analyze 1) whether recent trends can be related to changes in specific suicide methods and diverge by gender and age; 2) whether the decrease of suicide rates before 2007 as well as the increase from 2007 to 2010 are driven by the same suicide method. METHODS: Analyses were based on suicide data from the Federal Statistical Office of Germany. For 1998-2010, 136,583 suicide cases of men and women with known age and suicide method could be identified. These data were analyzed by joinpoint regression analysis, allowing identification of the best fitting point in time ("joinpoint") at which the suicide rate significantly changes in magnitude or direction. RESULTS: The national downward trend between 1998 and 2007 was mainly due to corresponding changes in self-poisoning by other means than drugs (e.g., pesticides) (annual percentage change (APC) <= -4.33), drowning (APC <= -2.73), hanging (APC <= -2.69) and suicides by firearms (APC <= -1.46) in both genders. Regarding the overall increase of age-adjusted suicide rates in Germany 2007-2010, mainly the increase of self-poisoning (e.g., by drugs) and "being overrun" (APC >= 1.50) contributed to this trend. LIMITATIONS: The true suicide rates might have been underestimated because of errors in the official death certificates. CONCLUSIONS: Increase in suicide rates in Germany since 2007 went
along with corresponding changes for "being overrun" and "self-poisoning". Copycat suicides following the railway suicide of the goalkeeper Robert Enke partly contributed to the results. Thus, prevention of Werther effects and limitation of the availability of high pack sizes for drugs are of special relevance for the reversal of this trend.

Sri Lanka has witnessed a fall in suicide rates in the period 1991 to 2010, however the incidence of self-harm remains high. Over the same period alcohol consumption has increased for both alcohol that is purchased legally and distilled privately. This paper investigates a number of secondary data sets from such bodies as the Department of Police, Registrar General's Office for Statistics, Ministry of Health and Nutrition, National Poisons Information Center and Lanka Library Forum to shed light on the link between suicide/self-harm and rising alcohol consumption. The authors conclude that there is a strong association between alcohol consumption and suicide/poisoning/deliberate self-harm in Sri Lanka and propose a number of research priorities.

Abstract Background: Suicide attempts and suicides constitute a significant burden on communities and health systems, especially in low income countries. However, many low income countries lack epidemiological information on which to base future preventive strategies. This study reports on gender and age profiles as well as the likely background and means used for suicide attempts and suicides in Bolivia. Method: This study presents 1124 cases from four different sources of information: (i) emergency ward data with suicide attempts by poisoning from the year 2007, (ii) psychiatric ward data including suicide attempts from July 2011 to July 2012, (iii) newspaper articles reporting attempted suicides and suicides from 2009 to 2011, and (iv) the National Statistics on Crime reporting suicides from the years 2010-2011. Data on age was stratified into three age groups: adolescents aged 10-19 years, young adults aged 20-29 years, and older adults aged above 29 years. Data from the hospital wards and Crime Statistics were pooled to compare characteristics of suicide attempts with suicides concerning age and gender. Data on age, gender, methods used, and reasons were analyzed using IBM SPSS version 21. Results: Hospital data showed that more females (403/657, 61%) than males (254/657, 39%) attempted suicide, and females attempted suicide at a younger age than males (p<0.05). In contrast to this, more males (208/293, 70.5%) than females (85/293, 29.5%) committed suicide, and furthermore it was most prevalent among young adults aged 20-29 years of both genders, as observed from the Crime Statistics. The dominant method was pesticide poisoning varying from 400 out of 657 (70.5%) of the hospital poisoning cases to 65 out of 172 (37.8%) of the newspaper cases. Newspaper data showed a higher mortality rate (65/77, 85.1%) among those using violent
methods such as hanging and jumping compared to non-violent methods (43 84, 50.9%) such as ingesting chemicals and drugs (p<0.05). The reasons were related to interpersonal problems, economic problems, depression, and unwanted pregnancies. Many cases of suicide seemed to be hidden due to cultural and religious reasons. Conclusion: More females attempted suicide, whereas more males realized suicide. Suicide attempts were most numerous among adolescents in contrast to suicides being most prevalent in the older age groups. Self-poisoning with pesticides was the most popular method used. Access to potential suicide materials should be restricted and psychosocial interventions initiated to prevent suicides.

BACKGROUND: The role of pesticides in suicidal acts has not yet received adequate attention in Greece despite an evident rise of 39% in pesticide use over the period 1990-1992 to 2002-2004. AIMS: To investigate the epidemiology of pesticide suicide on the Greek island of Crete, a largely rural agricultural area, and by further exploring the victim profiles, as well as patterns and trends of pesticide ingestion, to suggest probable preventive measures. METHODS: Self-poisoning suicides between 1999 and 2007 were reviewed and information gathered was entered into a computerized database. RESULTS: The overall incidence of intentional pesticide poisoning was 1.7 per 100,000, representing the second most frequently used suicide method after hanging. The victim profile was composed of the following features: middle aged male, rural inhabitant, who carried out a suicidal act by consuming primarily methomyl or paraquat (WHO toxicity class Ib and class II, respectively). As to the place of death, the vast majority was found dead in the place of intoxication. CONCLUSIONS: Pesticide self-poisoning accounts for a quarter of the suicides in Crete. More detailed research is required to identify aspects of these deaths amenable to prevention, but measures such as bans on the most toxic pesticides and changes in storage practice would appear to be sensible initial approaches.

BACKGROUND: Suicide is a major public health concern. The elderly have the highest rate of suicide and they make more lethal suicide attempts and have fewer psychiatric interventions than young people. Furthermore, they have old-age specific psychosocial difficulties. The present study investigated psychosocial risk factors and characteristics of an index suicide attempt of the elderly suicide attempters. METHODS: Subjects included 388 patients who were admitted to the emergency room following self-poisoning. Two age groups were defined: younger patients (aged less than 65 years) and older patients (aged over 65 years). Data including demographic factors, suicidal risk factors and information about the current suicide attempt were obtained from a retrospective chart review. RESULTS: The number of suicide attempters over the age of 65 years old was 57, and their mean age was 73.5 +/- 7.5 years. The elderly patients had more underlying medical illnesses than the under-65 group (p < 0.001). Depression was the most common psychiatric diagnosis. Psychotropics were the most commonly
ingested drugs in both groups, but the use of pesticides was more notable in the elderly. The elderly suicide attempters had higher risk-rating scores \( p < 0.001 \) and lower rescue-rating scores \( p = 0.014 \) than the under-65 group. Male-to-female ratio of the elderly group was nearly 1:1 unlike the under-65 group \( p = 0.004 \). \textbf{CONCLUSION:} Elderly suicide attempters had different psychosocial stressors such as physical illness and more lethal suicide attempts. Our study suggests the need for development of specific preventive strategies and management guidelines for the elderly suicide attempters.


\textbf{OBJECTIVES:} A study to investigate deliberate self-harm (DSH) in an African context was undertaken in Uganda. \textbf{METHODS:} A case-control study in which 100 cases of DSH and 300 controls matched on age and sex were recruited from three general hospitals in Kampala and subjected to a structured interview using a modified version of the European Parasuicide Study Interview Schedule I. \textbf{RESULTS:} Among the cases, 63\% were males, with a male to female ratio of 1.7:1 and a peak age range of 20-24 years. Higher educational attainment, higher socio-economic class and poor housing were significantly associated with DSH. District of current residence, district of birth, religion, ethnicity, marital status, number of children, current living arrangement, area of usual residence, employment status of respondent and partner were not significantly associated with DSH. Pesticides and medications, mainly antimalarials and diazepam, were the main methods of DSH used. The most commonly reported psychiatric disorders were adjustment disorder, acute stress reactions and depression. \textbf{CONCLUSION:} DSH in Uganda appears to predominantly afflict the young. Disturbed interpersonal relationships, poverty and loneliness were important factors in the immediate precipitation of this behaviour. The fact that pesticide poisoning is still the predominantly used method in DSH in this area calls for a review of the legislation that controls the sale and availability of these agricultural chemicals.


This long-term study in Sri Lanka explored the complexities behind self-inflicted pesticide poisonings by 166 Sri Lankans. Using or threatening to use pesticides for self-harm has become a response to stressful events and a powerful message towards a specific individual, or to the outside world in general, conveying misgiving, anger, sadness, hopelessness, frustration, or simply a way to manipulate a situation to one's own advantage. The effects of alcohol misuse are especially important in understanding self-harm at the community level in terms of the impact they have on the domestic environment. Also, issues around "love affairs," arranged marriages and domestic physical, sexual or psychological abuse in the domestic environment are referred to by many self-harmers or their relatives as a reason for ingesting poison. Clearly, easy access to lethal pesticides by impulsive individuals often living under economically or psychosocially
stressful conditions, combined with insufficient treatment facilities and limited outreach programs, can be a deadly blend. A strategy aimed at reducing the availability of the most toxic pesticides and improving case management should be implemented, as it is likely to reduce death from pesticides although unlikely to impact on the number of episodes. Support to families plagued by domestic violence and male alcohol misuse is essential to improve the quality of life for the most vulnerable and to reduce the number of self-harm episodes in the long-term.


OBJECTIVE: To analyze the characteristics of injuries between two types of Emergency Department (ED) in China. METHODS: We selected 25 hospital EDs in the whole country as spots for investigation, and designed one special questionnaire to collect information, from 1st July, 2001 to 30th June, 2002. RESULTS: In city hospitals (CH), the proportion of injury to all diseases were 19.65%, and in country hospital (COH) it was 29.88%. The fatality rate of injuries was 1.29% in COH, which was higher than that of CH's (P < 0.001). In COH, ambulance was more frequently used to treat injury patients than in CH, but the average rescue time was not different. In cities, machinery was the leading cause (about 32.88%), but in country it was due to transport (35.34%). Traffic accidents, suicide/homicide and unintentional drowning were the main causes of death. In CH, the number of unintentional poisoning was almost twice as intentional, but in COH the patients due to poisoning suicide act were more than unintentional poisoning, with 2/3 of the poisoning causes were women. Patients due to chemical, drug and food poisoning accounted for 86.13% in CH, while in COH the main causes were pesticidal, chemical and druggery (89.80%). In all poison, pesticide was the leading cause for death. CONCLUSION: It's suggested that patients with injury be treated timely since the acute injury patients accounted for important part of ED's patients. The differences between CH and COH were obvious, with better ability of treatment in CH than in COH. More relevant measures were needed to improve the ability of acute treatment for injuries.


OBJECTIVE: To investigate individual socio-demographic characteristics of suicides, the reasons, methods and means employed to commit suicide. DESIGN: A descriptive prospective study of suicides. A structured questionnaire was employed to enquire the details of the itemised objectives. SETTING: Muhimbili National Hospital–in urban Dar es Salaam. SUBJECTS: Fifty three males and 47 females consecutive suicides aged 15 to 59 years RESULTS: The mean age for suicides was found to be 28.2 years. Males were more than females and were ten years older. Sixty two percent of the
subjects were single, 30% married. Seventy two percent had primary school education, 19% secondary education. Main reasons for committing suicide were established in 61 cases of which 57.3% (35/61) were due to severe marital and family conflicts, overwhelming disappointments in love affairs and unwanted pregnancies. Eleven subjects with chronic somatic illnesses killed themselves due to unbearable physical pain and overwhelming economic deprivations motivated ten subjects to take their lives. Sixty nine subjects poisoned themselves predominantly using anti-malarials and pesticides while 27 hanged themselves. A third of the suicides consumed alcohol frequently and a quarter of the suicides were HIV positive, a rate twice the national prevalence for sexually active adults. CONCLUSION: Comparatively, women became vulnerable to suicide at a younger age. Dysfunctional social networks played a predominant role among suicides. Family and marital conflicts need closer social attention and timely counseling. Patients with chronic medical conditions and frequent alcohol use need effective exploration concerning suicidal ideation to avert self-annihilation. A policy to control prescriptions of toxic drugs including pesticides is overdue.


OBJECTIVES: The study aims to determine the incidence of suicide attempt, describe the methods used, and assess use of health care services including mental health care after suicide attempt in a rural area of Vietnam.

METHODS: All suicide attempters (104) during 2003-2007 were listed, diagnosed and re-evaluated by trained physicians according to the research criteria of the WHO Multicentre Study of Attempted Suicide. All attempters were interviewed by trained medical staff to investigate methods used, socio-demographic characteristics and use of health services. RESULTS: The yearly incidence was 10.2 per 100000 person-years, 10.6 per 100000 in males and 9.8 per 100000 in females. 99% of cases committed suicide attempt by poisoning, 62.6% by pesticides and 36.3% by pharmaceutical drugs. 34.3% reported having been in contact with somatic care and 13.2% had received mental health care. Among those who reported some treatment received, 47.5% had been in contact with official health care services, 8.1% had pharmacy keepers' consultation or were treated by traditional healers and 4% reported self treatment. CONCLUSION: The incidence of suicide attempt was lower in this population compared to other settings. While the majority of attempters use pesticides, many had used psychotropic drugs. Contact with mental health services following the attempt was very limited in this setting. Suicide prevention for this high risk group should focus on reducing access to pesticides and psychotropic drugs. Mental health services should be made more accessible in rural areas.


BACKGROUND: There is a paucity of data on intentional self-harm and suicide in Thailand. It is crucial to re-evaluate the burden and health outcomes. OBJECTIVE: To measure the character and burden of acts of
intentional self-harm in the Thai hospitalized population. MATERIAL AND METHOD: Acts of intentional-self harm were categorized using ICD 10 classification. All of inpatient-related data were analyzed using SPSS 17. RESULTS: Overall intentional self-harm in 2010 led to 24,924 hospitalizations and 854 deaths; an incidence of 35.6/100,000 people with the highest level in two age groups: 18-25 and 26-40 year-olds. Self-poisoning (89%) was the most common method and pesticide was the leading used chemical agents. The total cost of treatment was 149,672,190 baht and the mean length of stay was 2.9 +/- 6.7 days. The mortality rate increased as the population got older with the highest rate being 10.6% for 70-79 year-olds. In 33.8% of cases, psychiatric co-diagnosis were found with anxiety disorders was the leading comorbidity. CONCLUSION: The incidence of intentional self-harm was medium to high, compared to other East Asians countries. Self-poisoning by exposure to pesticides was the most common self-harm method. Age over 60 had the highest mortality rate. Having a psychiatric co-diagnosis was common.


BACKGROUND: Suicide is and has been a major public health problem in Sri Lanka and has generated a wide range of literature. AIMS: This review aimed to systematically appraise what is known about suicide in Sri Lanka. The patterns and content of articles were examined and recommendations for further research proposed. METHOD: The paper describes the systematic search, retrieval, and quality assessment of studies. Thematic analysis techniques were applied to the full text of the articles to explore the range and extent of issues covered. RESULTS: Local authors generated a large body of evidence of the problem in early studies. The importance of the method of suicide, suicidal intention, and the high incidence of suicide were identified as key foci for publications. Neglected areas have been policy and health service research, gender analysis, and contextual issues. CONCLUSION: The literature reviewed has produced a broad understanding of the clinical factors, size of the problem, and social aspects. However, there remains limited evidence of prevention, risk factors, health services, and policy. A wide range of solutions have been proposed, but only regulation of pesticides and improved medical management proved to be effective to date.


BACKGROUND: Suicidal intent has been described as the seriousness or intensity of the patient's wish to terminate his or her life. Suicide has become an important public health issue throughout the world. It is important to evaluate the intentions of suicide attempts and various psychiatric diagnostic perspectives to understand the multiple dimensions of suicide. Aims: The aim of the work was to study the severity of suicidal intention among suicide attempters in different psychiatric diagnoses and different mode of attempted
suicide. Materials and methods: This study was carried out in the patients, who attempted suicide, by various modes, who were admitted in the wards of KMCTH during 1st January 2007 to 30th December 2007. Suicide Intent Scale (SIS) was used in all the cases that had attempted suicide. Results: Total numbers of patients was 43. Mean SIS was 13.88. The results have shown that majority of cases were female 69.8% (n=30) and male were 30.2% (n=13). The commonest mode of suicide was poisoning 83.7% (n=36) in which moderate suicide intent was 58.3% (n=21); mild suicide intent 33.3% (n=12) and severe suicide intent 8.3% (n=3). Pesticide (organophosphorus) ingestion was the commonest mode of suicide 44.4% (n=18), followed by pharmacological drugs 33.3% (n=12). The commonest psychiatric diagnosis was depressive disorders 62.9% (n=27), in which moderate suicide intent was found to be maximum 70.4% (n=19) followed by mild suicide intent 14.8% (n=4) and severe suicide intent 14.8% (n=4). Conclusion: The increasing problem of pesticide poisoning and drug overdose demands strict legal scrutiny in the availability of common means of attempting suicide.


Objective: To investigate the epidemiological characteristics of suicidal poisoning in Toxicology Clinic, Emergency Hospital "Pirogov" Sofia in relevance to age, gender and socioeconomic factors. Methods: This was a retrospective review of all patients with attempted suicide, admitted for treatment of acute self-poisoning from January 1st, to December 31st, 2007 in the Clinic. The indicators investigated were of demographic, socioeconomic and of substance relevance. Results: A total of 360 patients with attempted suicide were included in the study, over a period of 12 months. The oldest patient presented was 89 years old and the youngest was 12 years old. The age group of the majority of the patients was 26-35 years. 20.6% were males and 79.4% were females. Suicide attempt intoxications were more common in unmarried persons (150 cases - 41.8%) and in patients with a regular job (147 cases - 40.8%). Medicines were the leading cause of self-poisoning. 350 patients (97.2%) had taken various medicines. In 10 other patients we documented different domestic products, pesticides etc. On a monthly basis, admissions during January, March, and June were most common (37, 34 and 33 patients, respectively). The most frequent cause for committing suicidal attempts by self poisoning found in both genders was: depression as separate disease; various social and economic reasons, isolation from social or family life. 5.28% (19 cases) had at least one previous suicidal attempt. There were 5 (1.39%) deaths reported among the cases. Conclusion: Suicidal behaviors are common in our society. Age group between 26 to 35 years in both genders proved to be associated with suicidal attempts. Female prevailed over the male, but males tend to make more severe attempts with the intention of completing it. Though depression was a major culprit, social or family problems were found to be the most frequent cause of suicide attempts.

Suicide is the third leading cause of death among young adults worldwide. There is a growing recognition that prevention strategies need to be tailored to the region-specific demographics of a country and to be implemented in a culturally-sensitive manner. This review explores the historical, epidemiological and demographic factors of suicide in India and examines the strategies aimed at the prevention of suicide. There has been an increase in the rates of suicide in India over the years, although trends of both increases and decline in suicide rates have been present. Distinct from global demographic risk factors, in India, marital status is not necessarily protective and the female: male ratio in the rate of suicide is higher. The motives and modes of suicide are also distinct from western countries. Preventive strategies implemented at a community level and identifying vulnerable individuals may be more effective than global strategies.


Deliberate self-harm is a challenging public health issue. We aimed to understand the behavior of deliberate self-harm, both fatal and nonfatal, in a tertiary health care setting. A two year retrospective hospital record-based research was conducted in a tertiary care hospital attached to a teaching medical institution in Karnataka to record socio-demographic profile and clinical outcome of suicidal behavior. Data were collected by using specially devised deliberate self-harm proforma. During the two year research period 137 patients were reported with deliberate self harm, among which 17 had fatal outcome and 120 recovered after treatment. Of these 58.4% were females and 41.6% males. The majority (48.2%) cases were from age group of 21-30 years. Victims were predominantly belonged to Hindu community (83.2%). The majority of acts of deliberate self-harm (90%) were committed inside the home. Poisoning was the commonest (57.7%) method of self-harm, particularly using pesticide. Psychiatric illness was seen in 67.9% deliberate self harm victims.


OBJECTIVE: To verify the presence of different groups of medically serious suicide attempters who had more clinical or surgical seriousness and required admission to a general hospital. METHODS: 121 patients admitted consecutively were assessed. A questionnaire containing items on the patient characteristics and psychometric scales to assess the suicidal intent and lethality were used. A cluster analysis was performed using the K-means method. RESULTS: Three groups were identified: 1) 43 subjects (mostly female) characterized by self-poisoning with medication and low suicidal intent, with highly impulsive suicide attempts; 2) 53 subjects (mostly males) who ingested pesticides and presented both moderate degrees of lethality and suicidal intent; 3) 17 subjects (predominantly males) who used more violent methods and presented high levels of lethality and suicidal intent. CONCLUSIONS: Grouped data of these inpatients could be misleading for
follow-up research purposes as our findings indicate that there are relatively
distinct clinical profiles among suicide attempters admitted to a general
hospital.

Suicide continues to be one of the biggest killers in the world, with suicide
rates varying between 8.1 and 58.3/100,000 population for different parts of
India. Andhra Pradesh, the fourth largest state in India, is responsible for
more than 11% of these. Unfortunately, most suicides are under-reported
and there is scant data on attempted suicides. This study aimed to
comprehensively study the characteristics of attempted suicides in Andhra
Pradesh and using the primary data, make secondary projections for the
forthcoming years. Using Patient Care Record (PCR) forms of all
emergencies serviced by 108, the first comprehensive emergency service in
India, an analysis of all cases was done to detect possible suicides during
the period January-December 2007. A follow up 48 hours later was then
done to confirm status and diagnosis. A total of 1007 cases were recorded
as confirmed suicides. Hanging and insecticide poisoning (72%) were the
most common methods used. Males preferred hanging and insecticide
poisoning while females preferred self-immolation and hanging as common
methods. Self-immolation and insecticide poisoning had the highest mortality
(41.6%). Estimates of attempted suicides for the year 2008 revealed a mean
of 3.2-3.8 per 1000 population for males, 3.3-3.7 per 1000 population for
females and 6.4-7.6 per 1000 population combined. A serious epidemic of
suicides seems to be in store in the coming years unless preventive steps in
the form of policy changes are undertaken. Restricting access to poisonous
substances or prescription drugs and taking into consideration the prevailing
social, economic and cultural factors could help in reducing numbers.
Starting tele-help services or offering brief interventions during hospital stays
are other programs which may be considered.

Sawalha, A. (2010). "Analysis of the self-harm cases received at Al-Watani
Governmental Hospital in Palestine." Clinical Toxicology Conference: 2010
International Congress of the European Association of Poisons Centres and
Clinical Toxicologists Bordeaux France. Conference Start: 20100511
Objective: To analyze the self-harm and suicidal poisoning cases which were
received at Al-Watani Governmental Hospital in Palestine during the previous
year from May 2008 - April 2009. Methods: All poisoning cases that were
received at Al-Watani hospital/emergency department that resulted from
self-harm or suicide were included. Demographic and clinical information
about the cases was collected, entered into SPSS, and analyzed. Results: A
total of 54 cases were included, the majority of the self-harm patients were
female (35 cases [64.8%]). Most self-harm patients were adults, with 13%
occurring at age 18, and 11% occurring at age 24. Most poisoned patients
were living in cities (57.4%), and a lesser percentage was living in villages
(31.5%), or camps (9.3%). Most self-harm cases were carried out using
medications (70.4%), others with pesticides, cleaning products, or other
products. Most cases involved a single ingestion (75.9%), while multiple
Ingestions were used in the rest. Only hours had passed before the poisoned patients decided to seek medical help in the majority of cases (44.4%), others did not specify the time of exposure to the poison(s). Oral ingestion was the route most commonly used (98.1%), and injection was used to a much lesser per cent. Regarding the decontamination, lavage was performed for 42.6% while only 7.4% received activated charcoal, and 11.1% had both. Conclusion: This is the first article that sheds light on such a sensitive issue in a country plagued by instability. The government needs to take further action on this issue in order to better help and protect citizens with depression or hardship. Continuous medical education is sorely needed for physicians treating self-harm patients. Support groups and psychological support should also be incorporated in order to better help patients.

Subba, S. H., V. S. Binu, et al. (2009). "Pattern and trend of deliberate self-harm in western Nepal." J Forensic Sci 54(3): 704-707. Acts of deliberate self-harm (DSH) not only affect the people directly involved, but also have grave psychological and social impact on the family and community. In the present study, a cohort of 173 cases of DSH reported from April 2002 to March 2005 was retrospectively analyzed, by perusing the medicolegal register maintained by the Emergency Department at the Western Regional Hospital, Pokhara in the Western Development Region of Nepal. The data were entered and analyzed using SPSS Version 10.1. More than two-thirds of total cases were females. About 60% of cases were observed in the age group of 15-24 years. Poisoning (89.6%) was the most preferred method of deliberate self-harm. Organophosphate pesticides were consumed in nearly two-thirds of the poisoning cases. The majority of cases were reported during the months of May to July and had occurred during the last quarter of the day. More than a twofold increase was observed in the frequency of cases during the 3-year study period. The said observations were compared and contrasted with the available literature across the globe. The presentation is concluded by highlighting the limitations encountered in Nepal and the scope to overcome the same.


BACKGROUND: Whether suicide in China has significant seasonal variations is unclear. The aim of this study is to examine the seasonality of suicide in Shandong China and to assess the associations of suicide seasonality with gender, residence, age and methods of suicide. METHODS: Three types of tests (Chi-square, Edwards' T and Roger's Log method) were used to detect the seasonality of the suicide data extracted from the official mortality data of Shandong Disease Surveillance Point (DSP) system. Peak low ratios (PLRs) and 95% confidence intervals (CIs) were calculated to indicate the magnitude of seasonality. RESULTS: A statistically significant seasonality with a single peak in suicide rates in spring and early summer, and a dip in winter was observed, which remained relatively consistent over years. Regardless of gender, suicide seasonality was more pronounced in rural areas, younger age groups and for non-violent methods, in particular, self-poisoning by pesticide. CONCLUSIONS: There are statistically
significant seasonal variations of completed suicide for both men and women in Shandong, China. Differences exist between residence (urban/rural), age groups and suicide methods. Results appear to support a sociological explanation of suicide seasonality.

A correlation between unhealthy parenting styles and child psychopathology has been established. This case report describes how chronic harsh paternal parenting caused a young boy to deliberately poison himself with organophosphate chemicals (rat poison). This report is intended to stimulate the interest of physicians and psychiatrists in parenting style research and in how parenting style modification can be a therapeutic and preventive tool.

BACKGROUND: Intentional self-poisoning with pesticides is a serious problem in many developing countries. It is a commonly used method among South Asians all over the world. AIMS: To describe the circumstances and characteristics of suicides in Nickerie, e, in order to gain insight into why South Asians commonly use self-poisoning. METHODS: An exploratory psychological autopsy study was conducted among 19 survivors of 13 suicides in the Nickerie district in Suriname. RESULTS: Impulsivity plays an important role in self-poisonings, as well as aggression and easy accessibility of pesticides. CONCLUSIONS: Possible answers to the question why South Asians often use self-poisoning as a method for suicide may be found in culture, upbringing, styles of communication and genetics. However, more research is needed to further explore these hypotheses.

This study aimed to assess cases of self-inflicted poisoning among adolescents reported by the Toxicological Care Center of a reference hospital in Recife-PE, Brazil. The data were collected between March and May 2010 from hospital charts and structured interviews with the participants and parents/guardians. Among the 25 cases of attempted suicide registered in the period, 21 were female adolescents, who made up the sample of the present study. The adolescents were between 13 and 19 years of age. Pesticides were the most frequent toxic agent used (81.9%). The results of the present study underscore the importance of studying suicide in this population, with a focus on family relations, in order to lay the foundation for the development of prevention and treatment programs for this vulnerable group.


Objective: The suicide rate continues to increase across the US and varies by methods. The World Health Organization identifies pesticide ingestion as one of the leading methods of suicide. Pesticide exposures are often reported to poison centers (PC) and a significant number of these exposures are related to attempted suicide. This study aims to evaluate the prevalence of suicide by intentional pesticide exposure in a large, demographically diverse state bordering Mexico. Methods: Exposure cases for the most recent 12-year period (2000-2011) were retrospectively analyzed from our PC network database. Cases were evaluated for their exposure characteristics, outcomes and the relationship between suspected attempted suicides and pesticide exposures. A range of 119-139 cases of suicide by pesticides were reported each year. The study excluded patients under age twelve. Results: Over a twelve-year period, a total of 1495 cases were reported in which patients attempted suicide by exposure to pesticides. Insecticides (46%) and rodenticides (46%) accounted for the type of pesticide used in the majority of cases. Cases were distributed by sex in a 3:2 ratio of males to females. Patient age was 20-years-old or greater in 84% of cases. These attempted suicide exposures by pesticide occurred in the patients' residence (91%) and the route of exposure was by ingestion in 97% of cases. Analysis of the initial management site reported showed that 77% of the patients were in route or already in a healthcare facility (HCF), while 21% were referred to a HCF. Major or moderate effects were present in 18% of cases, 51% of cases had minor or no effects, 7% of cases were not followed, and 23% were not able to be followed. Death was the medical outcome in only 1% of cases. When examining demographic variations for these exposures, reported attempted suicide by pesticide exposure occurred in urban communities in 85% of cases and 15% in rural communities. Upon further examination, based upon population in rural vs urban areas, the rate of 100,000 population was 7.29 in rural communities and 6.85 in urban communities. The comparative exposure rate/100,000 population for cases occurring in counties that are located along the US-Mexico border was 8.11 versus 6.79 in non-border counties. Conclusions: Rural areas and border communities are at greater risk for attempted suicide by means of pesticide exposure. This study reveals that with a steady frequency of pesticide poisoning by suicide, there is a need to train and equip healthcare facilities to work with PCs in the evaluation and treatment of these poisoned patients. Because pesticides are easily accessible and stored without any precautions in most households, the frequency of these exposures is likely to continue.


This study determines the risk factors associated with suicide rates and the investigation of time trends in the deprived region of Epirus, north-west Greece, which is considered to be one of the least developed prefectures of the EU. Data selected demonstrated: (1) a mean age-standardized suicide rate per year of 4.00/100,000 for males, 1.29/100,000 for females and 2.65/100,000 for the total population; (2) a significant rising trend of male suicides
in the 35-44 and 65-74 age groups; (3) a low female suicide rate in < 35 years age group and a relatively stable rate in the other age groups; (4) a significantly higher suicide rate in men than in women from both urban and rural areas and in older men from rural areas; (5) higher rates of suicide among widowed men and unmarried women; (6) the use of predominantly violent suicide methods, especially self-shooting, hanging and drowning; (7) a significant peak in the total suicide rate in the spring and summer months and a decreased rate in September; and (8) three out of four of the suicide victims had consumed alcohol and/or other drugs before the act. Data reported here shows some remarkable trends compared to previous reports on suicide in Greece and other countries, probably due to cultural and life style characteristics of the study population.


Objective: To document the characteristics of self-poisoning suicide attempters who were brought to the University Hospital of the West Indies (UHWI) Emergency Room and to outline the type of drug used in the attempt. Method: This was a retrospective study conducted over the period 2005-2009. Data were gathered from patients’ case records, log books and the hospital records using a questionnaire developed for this study. The questionnaire examined demographics, parameters of the drug ingested, patient’s disposition, and reasons for attempt, final outcome and the type of discharge of patients who reported to the UHWI Emergency Room due to a suicide attempt by self-poisoning. Results: Over the five-year period, 127 cases of suicide attempt by self-poisoning were reported. Significantly more females than males presented to the hospital due to self-poisoning (3:1, \( \chi^2 = 33.37; p < 0.001 \)). Of this amount, 96 cases (75.6%) were females and 31 (24.4%) were males. The age group most recorded was 16-30 years (70.8%). The most common reason for the suicide attempt was an interpersonal conflict (52%). The drug category most often used in self-poisoning was analgesics (52%) with acetaminophens being the most common (26.2%). Conclusion: These findings are consistent with global suicide trends and indicate an urgent need to develop and implement national preventative and treatment measures for groups known to be at risk of suicidal attempts.


As the largest continent in the World, Asia accounts for about 60% of World suicides. Preventing suicide by restricting access to suicide methods is one of the few evidence-based suicide prevention strategies. However, there has been a lack of systematic exploration of suicide methods in Asian countries. To amend this shortage, the current review examines the leading suicide methods in different Asian countries, their trend, their age- and sex- specific characteristics, and their implications for suicide prevention. In total, 42 articles with leading suicide methods data in 17 Asian countries/regions were retrieved. The epidemiologic characteristics and recent trends of common suicide methods reflect specific socio-cultural, economic, and religious
situations in the region. Common suicide methods shift with the introduction of technologies and constructions, and have specific age- or sex-characteristics that may render the restriction of suicide methods not equally effective for all sex and age sub-groups. Charcoal burning, pesticide poisoning, native plant poisoning, self-immolation, and jumping are all prominent examples. In the information society, suicide prevention that focuses on suicide methods must monitor and control the innovation and spread of knowledge and practices of suicide "technologies". It may be more cost-effective to design safety into technologies as a way of suicide prevention while there is no rash of suicides yet by the new technologies. Further research on suicide methods is important for public health approaches to suicide prevention with sensitivity to socio-cultural, economic, and religious factors in different countries.


Aim: The objective of the study was to examine the toxicological characteristics of suicide attempts by deliberate self-poisoning in children and adolescents. Method: From the Toxicological Information Centre's database, the inquiries due to the suicide attempts in children (9-13 years old) and adolescents (14-18 years old) were evaluated. Results and conclusions: From 10,492 calls concerning suicide attempts, 2393 concerned children and adolescents. Most suicide attempts were attempted in spring (31.3%). Among the toxic agents, drugs were used in 97.8% cases. The most frequent ingestions appeared using drugs affecting the nervous system and anti-inflammatory non-steroids. The dose was evaluated as toxic in 73.4%, severely toxic in 3.0% and unknown in 11.2% cases. Only one in 10 children used a non-toxic dose. Girls, more frequently than boys (13.2% vs. 8.9%), used non-toxic doses. The symptoms of moderate and severe intoxications were present in 10.5% of the cases. Poison centre consultation was accessed within the first hour after the ingestion in one-fifth of the patients. In both age groups, the severity of the intoxication was greater among elder males who reached the medical facilities later than 4 h after the poisoning. The combinations of three or more drugs affecting central nervous system were present in the most severe cases. 2013 Elsevier Ireland Ltd.


This study was designed to determine if there is a relationship between the degree of suicide intent and the lethality of means employed by those who try to kill themselves. The study sample consists of 74 suicide attempters admitted to emergency rooms in a northeastern area of China. Structured interviews were performed with the patients and their companions to the hospital if necessary. It was found that the reason for the suicide attempt claimed by the highest percentage of attempters (35 of 74) was love marriage issues, and there were significant gender differences in suicide reasons. It also was found that the choice of suicide means is generally independent of gender, and the lethality of means is positively correlated with the degree of suicide intent. One of the implications of the findings is a better understanding of the higher suicide rates for Chinese women than Chinese
men. A hypothesis for future study on Chinese suicide may be that the high fatality rate of Chinese women who have swallowed poisonous pesticide is a function of the strong intent of death of the victim coupled with the well-known lethality of the pesticides.