Suicide in Kaski District

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Abstract

The Western Region Community Mental Health Programme conducted a study about suicide in two phases. In phase I, 287 cases brought to the Western Region Hospital for post mortem were analyzed to discover the causes of death. The 49 cases of hanging and the 20 cases of poisoning were taken as suicide cases. A suicide rate ratio of 12.4 was found. In phase II, interviews were done with relatives of complete suicide cases when the dead body was brought to hospital for post mortem, and with the relatives of attempted suicide cases when they were in the hospital for treatment. In cases of suicide, hanging was found as the most common means, followed by poisoning. Use of poison was the main method of attempted suicide. Mental illness, particularly depression and psychosis, alcoholism and clear psychosocial stress were important causes of suicide in this study. Some of the relatives of the deceased responded as if everything was normal before committing suicide.

Keywords: Suicide; hanging; poisoning.

Introduction

To gauge the size of mental health problems in Nepal, the Western Regional Community Mental Health Programme (WRCMHP) decided to do more research into particular mental health problems. Virtually, no research has been done in the mental health area in the country, hence we focused on basic research in subjects like prevalence of mental disorders and psychiatric mortality.

One of the causes of mortality in mental disorders is suicide. Suicide is *any death that is the direct or indirect result of an act accomplished by a victim who knows or believes that this will be the result*.[1]

Suicide is, in most countries, one of the first ten causes of death, and one of the first three causes of death in youths. Worldwide, almost 1.4 million people commit suicide every year. That is approximately 1.5% of the yearly world's mortality.[2] The complication with mortality statistics for suicide is that the data in each country is collected in a different way; it even varies within one country. For example in India, the country which is most comparable with Nepal in culture, religion and politics, has the highest suicide rate (26.3 per 100,000 in 1990) in the state of Kerala, which has good health services, high literacy rate and is fairly rich. But in the contrary, the state of Bihar which is poorer and has a lower literacy rate, has a very low suicide rate (1.7 per 100,000).

Table I: Suicide rates in Select Countries.

Country	*Rate per 100,000*		
(Year of Data)	*Total*	*Male*	*Female*
Hungary (1991)	38.6	58.0	20.7
Sri Lanka (1986)	33.2	46.9	18.9
Japan (1991)	16.1	20.6	11.8
Canada (1990)	12.7	20.4	5.2
India (1988)	8.1	9.1	6.9
UK (1991)	7.9	12.4	3.6
Thailand (1985)	5.8	7.1	4.5

Source: WHO Division of Mental Health, in Desjarlais et al. (2).

Table I shows that suicide rates vary among rich and poor countries. The determinants, socially and personally vary from country to country, although social transformation in a broader context seems to be a predominate factor for higher suicide rates.

In studies it is found that the majority of people who commit suicide suffer from a psychiatric disorder; 47-70% of all cases had depression, 15-27% were alcohol dependent and 2-12% had schizophrenia. Amongst people who made an attempt for the third time, reached criteria for a formal diagnosis.[3,4]

Durkheim did the first systematical research on suicide 100 years ago. Durkheim distinguished three main types of suicide: 1 **egoistic suicide**, 2 **altruistic suicide**, and 3 **anomic suicide**. In the 'egoistic suicide', society is not sufficiently integrated in the life of an individual and *...men no longer see any justification for life;* 'altruistic suicide' *occurs because that justification seems to be beyond life itself*'5, in other words the individual is too integrated into society that the 'self' has too little autonomy. In 'anomic suicide', *there is a lack of regulation in the individual*. Anomie, the state of normlessness, increases in periods of economic recession and unemployment, but also in times of sudden economic prosperity; Durkheim argued that anomie also increased among those whose marriages broke down. Durkheim's contribu-tion to the knowledge about suicide is his effort to see an individual act in the light of sociological events. Suicide is not necessary an act of a person with psychopathology. The social context seems to determine if someone commits suicide or not.

In literature about suicide, non-fatal attempts are usually called *attempted suicide* and *parasuicide*. A newer term is *deliberate self-harm*. In the latter, there is absence of any intent by the person involved. Self destructive behaviour maybe performed with or without the intent to die. Also the former two terms do not refer explicitly to suicidal intent. These terms are mostly defined in terms as *intentional self injury or deliberate ingestion of substances excessing any therapeutic dosages or substances never intended for human consumption, but with non-fatal result.*6

We assume the term *attempted suicide as a non-fatal deliberate self injury (with or without an intention to end one's life).* Suicide and attempted suicide are closely linked. Hawton & Fagg found that 40-50% of suicides do have a history of attempted suicide.7

Clusters of suicide are not unknown in Nepal. In her study of social life in Nepal, Shrestha described that in 1926, when Tribhuvan Chandra Military Hospital was inaugurated, the public was allowed to gamble for three days. But the debts became so high for many gamblers that several of them committed suicide in the Rani Pokhari.8

In Nepal, there are regular newspaper articles about cases of suicide. Particularly when the expected reason of the suicides is thought to have to do with relationship between young men and women. There is evidence from other countries that reports about suicides in the media can be linked with following suicides.9 This statistical association might be an evidence for an 'imitation' effect.

In India, studies show that suicides are mostly prevailing in the age group of 15-30 years and the suicide rates are low among the elderly. In a study about suicide among Indian immigrants also, more women committed suicide than men.10 This is different what is found in the USA, Britain and the Netherlands. Studies in those countries show a higher suicide rate in elderly and in men.11,10,6

A contributory factor in suicide in young Indian women is the arranged marriage with the tradition of dowry.10

Trying to get more comprehension of suicide in Nepal we delineated a questionnaire to interview significant others. But first we tried to find out how many suicides are done in the aggregate in Kaski District.

Kaski is the central district in Western Region. Its headquarters are in Pokhara. The total population of Kaski is almost 336,500 (Nepal District Profile, 1997). The total population of Pokhara Municipality is 110,000. The Western Region Hospital (WRH) is situated in Pokhara. The bodies of the persons deceased by an unnatural death are brought to the WRH for post mortem. Sometimes deceased from neighbouring districts are brought there for post mortem.

In Kaski all the paramedical Health Post staff are trained how to diagnose major mental disorders such as depression, psychosis, and epilepsy. They are also taught how to give basic medical treatment of these disorders.

Methodology

Phase I

In the first phase of the study, all the records of post-mortem cases over 1996 were analyzed. These records were collected by Western Regional Hospital staff without research purpose. Also the post-mortems were done without research intention. The medical staff have to obtain a post-mortem when the police bring in cases of unnatural death. The police by virtue of their job description recount the cause of death in legal terms not in medical terms. Accordingly the conclusions of the cause of death have a mixture of medical and legal terms.

Phase II

In the second phase the research psychiatrist held a semi-structured interview with relatives or friends of people who came for post-mortem in the hospital. Whereby the cause of death was almost certain - suicide. He also held interviews with persons who made an attempt of suicide and, if they did not want to talk, with the relatives. In this way a 'psychological autopsy' was attempted.

Results

Phase I

In Kaski District, the WRCMHP trained all the paramedical staff in all the Health Posts (HP) in basic treatment of common mental disorders. Although the utility rate for mental health service at HPs tends to be rather low12, several people do get treatment from

these HPs or do go to the psychiatric OPD of WRH. Also an increasing number of people are aware of the presence of mental health services in the district. However, none of the people who committed suicide were seen at any HP for treatment of any mental illness' as expected, though many did have a major mental disorder.

In a period of almost 2 years, 287 cases were seen for post mortem in the Western Region Hospital (WRH) Pokhara. In Fig 1 the causes of death according to police records are shown.

The 49 cases of hanging and the 20 poisoning cases can almost for certain be interpreted as suicide cases. Although it always should be kept in mind that in these situations homicide could also be the case. We did not see any police investigation reports or any legal charges.

Fig. 1: Causes of death; post mortem cases WRH (N=287); B.S. 2052 & first 11 months of B.S. 2053.

On the other hand, some drowning cases and even some burning cases may actually be suicides. Suicide by burning is seldom found in western countries but studies in India show that this a common method among Hindu women. Of the Indian women immigrated to Britain and who committed suicide, 27% did this by burning themselves.[10]

The difficulty is that we cannot prove the intent of any of the victims. We are restricted by recognizable results. Self-destructive behaviour such as risk taking in traffic, hazardous drug use go beyond our sight. Neeleman suggests to see both suicidal intent and self-destructiveness as normally distributed variables in population (Fig 2) with the conclusion that some number of accidental deaths can be claimed as suicide cases.[6] It is still arbitrary how big this claim can be.

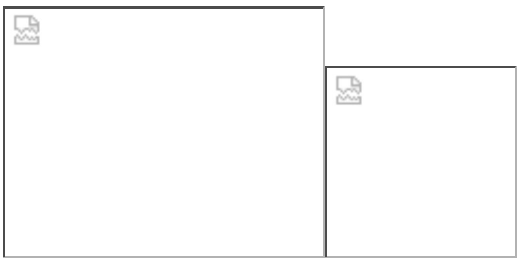

Fig. 2: Suicide classification.

Fig. 3 shows the causes of death of the persons who were living in Kaski District.

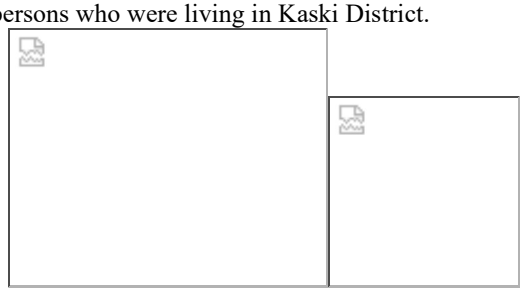

Fig. 3: All Kaski Post Mortem cases B.S. 2052 and 11 month of B.S. 2053.

It must be borne in mind that this study has a number of limitations. Unfortunately, census data on age distribution was not available. Therefore, we only could calculate a crude (unadjusted for age) suicide rate ratio. Also an over-representation of post

mortem cases from the Pokhara Valley meant that this suicide rate ratio had to be limited to this specific area. We found a suicide rate of 12.4 per 100,000 per year, with a suicide rate of 18.9 for men and 4.8 for women.

Phase II

The research psychiatrist saw over a period of 4 months* 31 cases of complete suicide and 14 cases of attempted suicide. The cases of successful suicide were brought in for post mortem in the WRH. The cases of attempted suicide were also brought for treatment in the same hospital.

Table II: Prevalence morbidity in suicide victims.

	male	*female*	*alcohol*[a]
got treatment for mental illness depression psychosis		2 2b)	
possible mental illness	3	4	1
clear psycho-social stress	4	1	1
not known	8	3	2

a) the person was alcoholic or had drunk alcohol just before suicide.

b) one person had made an attempt before.

In table II, we find the suspected psycho-social situation of the suicide victims. The mean age of the men was 45 (min 18, max 66), and that of the women was 36 (min 14, max 65). It was found that women often had clear mental disorders or mental illness could be suspected. In cases where a clear mental disorder could not be diagnosed clear psycho-social stress could be traced in 4 men and 1 woman. Among the younger persons, family conflict is thought as a precipitant of suicidality.

Hanging as a method of suicide was done by almost 4/5 of the women and almost 1/2 of the men (Fig. 4).

Fig. 4: Method of suicide by gender.

Analyzing their help-seeking behaviour, all the women and all but 2 men had been to either a health post, medical shop or hospital. Four men and 2 women had apparently a physical disease, but 2 of these men and both women also had psychological problems which were not diagnosed by the health professionals.

No relationship was found with other suicides in the area.

Fourteen patients in the hospital were identified as attempted suicide cases (Table III). They came to hospital to get treatment for the results of their self harm. Some other cases may have come for treatment for their self-injured wounds, but this has not been revealed to the staff and/or was not detected by the staff.

Table III: Prevalence morbidity in persons attempting suicide.

	male	*female*

got treatment for mental illness depression psychosis	2 1a)	1
possible mental illness		
clear psycho-social stress	1	
not known	5	4

a) had made attempt before.

Only 5 women were seen. The mean of their age was 22 (min 16, max 28). The mean age of the men was 32 (min 18, max 46).

The methods of attempted suicide were hanging, intake of poison, intake of organo phosphor products, intake of medication, jumping, cutting (Fig. 5). Except one, none of the subjects involved were willing to explain their reason for making the attempt. No relationship with suicides in the area was found.

Fig. 5: Method of attempted suicide.

Discussion

Neeleman's model (Fig. 2) suggests that a number of unnatural causes of death explicated as accidental death, in reality can be claimed as suicide. If the list of causes of death according to the post mortem data is compared with our own list of methods of suicide, we noticed that in the former jumping from a high place, and cutting are not mentioned. We found these methods used only by the attempted suicides. Because we did not find them as methods in suicide and because they are not mentioned in the post mortem reports we presume that a number of suicides were classified elsewhere in the list of unnatural death.

Considering Neeleman's model and the limited classifications of unnatural death according to the post mortem reports, we conclude that some burning cases, some drowning cases and some accidental death have been suicides. This and the fact that women were under represented makes us decide to present our suicide rate ratio as a very low estimate. The found suicide rate of 12.8 is comparable with Canada (Table I).

In our study we did not come across clusters of suicides and attempted suicides. We did not find indications for an imitation effect from suicides reported in the media.

It is interesting to notice that firearms are not used in complete or attempted suicide.

Risk factors for suicide

The most important risk factor for suicide is the presence of a mental disorder.

The most common disorders related with suicide are mood disorders (both depression and manic-depression psychosis), alcohol and/or drug abuse or dependence.

Other mental disorders which are associated with a substantial increased risk of suicide include schizophrenia and personality disorders.

The presence of a combination of disorders in people who commit suicide is most likely. Comorbidity of alcohol abuse or dependence plus major depression is most common.

Other risk factors for suicide include:

family and personal history

- family history of suicide
- history of suicide attempt(s)
- previously expressed desire to die

developmental history

- history of sexual and/or physical abuse
- poor relationships with family members

personality characteristics

- impulsivity
- perfectionism
- angry when drunk

current social factors

- recent breakup of close relationships
- loss of job or income
- pending legal charges
- absence of supportive relationships
- suffering from an incurable disease e.g. HIV
- being stigmatised for having a mental disorder

Assessment of suicide risk

The first and most critical step in the assessment on suicide risk is to seriously judge the chance and to ask suitable questions. Often it is thought that asking patients about suicide may give him or her the thought to suicide. There are no reports which proves this idea. Sometimes persons with distinct suicide plans may minimize or deny them even if asked.

It is mostly more appropriate to enquire about suicidal thoughts in a series of questions, rather than bluntly asking about suicide. Therefore some of the succeeding questions could be used together to assess suicide risk.

- Do you see any future for yourself ?
- Do you think a lot about death ?
- Have you thought you would be better off dead ?
- Have you thought about suicide ?
- What are your plans as to how you would kill yourself ?

The realization of the risk factors for suicide together with a series of question, as those above, must make it possible to make an assessment of suicide risk. The compound of suicidal thoughts and mixture of risk factors which is of most weight.

How to manage suicidal people

The outweighing starting consideration is safety. Hence, if a person is considered to be at high risk over the next few hours or days, then he/she needs a safe ambience. For some, admission to hospital maybe necessary.

Management out of hospital requires close supervision by confident family or community members. Whereby the development of a good relationship is likely to be an important factor. Simultaneously, management of any mental disorder (if present) especially depression and alcohol and drug problems should be done. Paradoxal reaction to antidepressant drugs have been reported since 1963. These reactions may encompass increased hostility, aggressiveness and suicidality, and have been described as a rare

complication of treatment both with tricyclic antidepressants and with non-tricyclic drugs. Anecdotal reports have suggested that the combination of impulsive or aggressive behaviour with current non-response to treatment may predispose certain patients to a paradoxical increase in aggressive acts including suicide.[13]

Current interpersonal or social factors which are possibly contributing towards the suicidal thoughts should be addressed. Also here it should be kept in mind that alcohol use adversely affects a person's capability to use behavioural strategies to manage psychological and/or social problems.

Prevention

Clinical level

Family psychoeducation must be an integrated part in the treatment of people with a mental illness. Family members should receive information about the risk factors of suicide, observing signs of manifestation recurrence, and knowing how to react to suicidal thoughts or behaviour.

Public Health Services level

Serious psychiatric disorder is one of the most potent risk factors for complete suicide. Early detection and treatment of mental disorders may substantially decrease the number of suicides. Previous research in Nepal has shown that almost 30% of all patients utilizing health services do have a recognizable mental illness.[14] In our programme area, we knew of 2 persons suffering from a mental disease who committed suicide after the treatment was discontinued because the medication was out of stock and patients could not afford to buy medicines. Worldwide studies show that especially the poor, those who cannot afford longtime medical treatment (what often is the case in mental diseases) suffer from mental illness.[2]

Making mental health service a real integrated part of any health service should be done with great speed.

Also alcohol abuse, with or without a comorbidity with another mental disease,
is a strong risk factor. People dependent
on alcohol hardly make use of health services.[15]

Despite this, the link between alcohol abuse and suicide demonstrate the need of public health education regarding 'sensible drinking'.[16]

Acknowledgement

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