

TOWARD SUICIDE PREVENTION

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ABSTRACT

Suicide is an important mode of death. There are many psychiatrically ill patients in therapy running different degree of suicide risk. The risk of death by suicide is with almost all psychiatric illnesses, but it is found more with depressive disease, schizophrenia and personality disorder. Many studies have reported higher incidences of suicide attempts and suicide among alcoholics, which is often precipitated by family crises. Drug problems, low threshold for tolerance of day to day frustration, unemployment and poor parenting are major causes for youth suicide.

There is biological evidence of suicidal behaviour. Fall in the level of serotonin and 5-HIAA in the CSF and in hind brain is found in subjects dying from suicide. Researchers have found decreased melatonin level in depression and suicide attempters. Long term therapy with antidepressants (Tricyclics), mood stabilizers (lithium and valproate) and new SSRIs prevent relapses and lessen suicide. It was concluded that general hospital doctors are in position of reducing suicide rates. Education of physician in detection of depression and suicide prevention will result in decline in number of suicides. The important measures include limiting the ability of methods of self-harm, antidepressants, paracetamol and insecticides.

Key words : Suicide, depression, suicide prevention, suicide rate

Suicide is an important mode of death, others being death from Natural causes, Accidents and Homicides (NASH). The French sociologist Emil Durkheim (1951) constructed the sociological theory of suicide classifying suicides into three major categories: egoistic, altruistic and anomic. Durkheim attributed suicide to sociological causes disregarding the role of psychiatric illness. His theory holds that rates of suicide are very high in societies where there is either a high or a low degree of social integration. He termed these as 'altruistic' and 'egoistic' suicides respectively. Cohesive religions, families and sound economy illustrate integration and regulation and when they are weak, integration as well as regulation too weaken. The protective influence of religion according to Durkheim is attributed more to its being a 'society' rather than from its rites, rituals and dogmas. A strong integration fostered by

Catholic church explains low rates of suicide among its followers while lesser integration of the protestants resulting from individualism, predisposes to a higher rate. Differing from integration is the 'regulation' of the individual by the society and when this weakens, 'anomic' suicide results. Altruistic suicide is rare in modern societies while egoistic and anomic suicide are common. Durkheim's sociological typing of suicide being retrospective may not be of much benefit in clinical practice. Notwithstanding the major contribution of Emil Durkheim in understanding suicide it is being doubted whether measures directed against social 'determinants' have yielded expected gains in preventing suicide. This has been refuted to some extent as indicated later in this write-up. The relationship between social disintegration and suicide is being witnessed in Baltic states especially in Lithuania which has recorded the world's highest rate (50/

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100,000) following the collapse of the former Soviet Union (Haghighat Rahman,1997). Though earlier psychiatric literature did consider mental illness as significant, it is only in recent decades it has re-emerged as an important contributor to suicide. Interestingly, a view has been advanced that suicide behaviour runs as a distinct abnormality in the population and this requires a triggering either by psychiatric disorder or adverse psychosocial circumstances for suicide to eventuate.

MEDICAL MODEL : STRENGTH AND WEAKNESS

A psychological 'autopsy' carried out in St.Louis city (US) nearly 40 years ago involving 134 consecutive suicides in a year and 305 interviews of survivors revealed that 95% of suicides were psychiatrically ill at the time of ending their lives (Robins et al.,1959). Two principal diagnoses namely manic depressive illness and alcoholism accounted for 2/3rd of suicide mortality. This finding has since been replicated in more than a dozen studies reinforcing the important role of mental illness especially depression. To confirm that this picture is not confined to the western world, a study of 30 suicides from Taiwan in 2 distinct aboriginal population of larger group of mainland Chinese revealed that depression and alcoholism to be the antecedents of suicide (Cheng, 1995). Hence medical (psychiatric) background of suicide appears to be the same the world over cultural differences notwithstanding.

The risk of death by suicide is ever present in almost all psychiatric illness and more so in depressive disease, schizophrenia and 'personality disorders'. It has been argued that recognizing and treating mental illness is a more viable method than attempts at directly preventing suicide. The importance of positive mental health as a protective is being increasingly recognised while factors that 'diminish' mental health are held as suicidogenic. Supporting the 'mental illness view' (medical model) is the fact while suicides in terminal

illness and cancers are several times more than suicides in general population, suicide in these states seldom occur 'outside' the context of depression. However social factors and psychological factors are not to be ignored. "It is the psychological and spiritual condition of the person, not the cancer which is the actual cause of suicide. It is the transient psychic illness that leads to suicide which can today be cured."

Defeat Depression Campaign have been launched in many countries to raise the threshold of awareness of depressive disease thereby enabling depressed people seek medical help. While there has been a good response to these campaigns there is a view that it may not accomplish appreciable detection owing to the very nature of disease e.g. sense of pessimism making them avoid treatment. The illness mesquarades under many 'proxies' simulating diverse physical illness. It has been said of depression : "it takes 10 years and three doctors to arrive finally at the diagnosis of depression" (Whybrow,1997). Nevertheless such campaigns tend to support the feasibility of the medical model.

In a recent report in the British Journal of Psychiatry, of 44 psychiatric disorders studies 36 were found to have significantly raised 'standardised mortality rate' for suicide (Harris & Barragrough, 1997). It was suggested that virtually all mental disorders carry an increased risk of suicide barring mental retardation and dementia. The suicide risk is highest for functional (primary psychiatric disorder) and least for organic disorders with substance misuse disorder falling in between. The report was based on abstracted 249 papers from index medicus 1966 to 1993. The report also indicated that 9 medical disorders to have a significantly raised suicide risks. This report to a great extent confirmed the St.Louis group's conclusion. The grouping of the disorder organic, substance abuse and functional was in the ratio of 1:2.4 - emphasizing high risk attached to the functional disorders.

NEUROTRANSMITTERS

There is biological evidence for suicide

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behaviour. There is a fall in the level of neurotransmitter - serotonin and its metabolite 5 HIAA (hydroxyindoleacetic acid) in the cerebrospinal fluid and also in the hind brain (on autopsy) in subjects dying from suicide (Asberg et al., 1976). Nevertheless there are subjects with 'lower' levels in whom suicide behaviour is not noticed. Even in depression not all subjects indulge in suicide behaviour (Venkoba Rao, 1995). This means that suicide behaviour in them under adverse social circumstances may be result of the latter's triggering action. Research by Madurai workers on melatonin (a hormone elaborated by pineal gland) has indicated that its levels are significantly lower in depression. Very low levels occur in those who attempt suicide. Low melatonin levels have been correlated with a sense of 'hopelessness' - a predictor of suicide behaviour (Venkoba Rao et al., 1988).

Suicide prevention through treatment of mental illness (especially depression) tends to be more feasible and fruitful than tackling psychological and social measures. Depression is a long term illness with frequent recurrences or leading to chronicity. If this principle is followed the number of suicides in chronically mentally ill can be expected to be brought down. Long term therapy with anti-depressants (tricyclics), Mood stabilisers like lithium, valproate and the new SSRIs (Fluoxetine, Sertraline) prevent relapses and lessen suicides. "In 1992, it is poor medical practice to manage the long term illness with short term treatment" (The Lancet, 1992).

LITHIUM PROPHYLAXIS

The usefulness of lithium in this area has been well documented but its use needs a careful monitoring (Coppen et al., 1991). Its side effects have unfortunately been exaggerated. These are negligible considering the benefit. Reports from international group of 'lithium-treated patients' involving 940 patients from special lithium clinics in Australia, Canada, Denmark, Germany and UK indicated that lithium therapy suitably monitored and continued well beyond 2 years reduced mortality (normalising to population level) in manic depressive illness both from

suicide and cardiovascular diseases (Muller-Oerlinghausen et al., 1991). Suicide figures in untreated manic depressive are several times higher than in the normal population. Lithium therapy has been shown to reduce the number of relapses as well as their intensity.

Several other studies have proved the significant reduction in suicidal behaviour of patients with recurrent mood disorders who were on prophylactic lithium therapy (Rihmer et al., 1990; Venkoba Rao et al., 1982). Having examined retrospectively the suicide behaviour of 36 outpatients with bipolar affective disorder who have been on prophylactic lithium therapy for atleast 2 years (maximum 18 years) (mean 7.2 years), some supporting evidence for the positive role of prophylactic lithium therapy in preventing suicide was obtained. Compared with the pre-lithium period (mean 7.2 years, range 1-28 years), there was a significant reduction not only in the number of suicidal patients, but also in the number of suicide attempts from 15 patients and 25 attempts to 1 patient and 2 attempts. However these reports on lithium have not gone unchallenged (Rihmer et al., 1993). Epidemiological observations suggest that even if 100% success is achieved in the treatment of depression in a given general population, one may expect to reduce suicide rate by 30% only. Further assuming that less than 50% of depressed patients receive adequate treatment and the treatment is effective in around 70% of cases, the expected reduction in the rate of suicide mortality will be about 10% (WHO, 1998). Similarly Goldstein et al. (1991) reported the impossibility of identifying any one among the 46 subjects who committed suicide from the baseline 2000 high risk hospitalized patients with affective disorders. Hence even most effective treatment of depression may not affect the suicide rate ultimately.

UK's 'HEALTH OF NATION'

The white paper 'the health of Nation', UK's national response to WHO's call for health for all by the year 2000 envisaged a strategy of identifying mental illness as one of the five

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priority areas, others being cardiovascular diseases, cancers, HIV and accidents. (Department of Health, UK, 1992). The three sub-targetted areas under the 'mental illness' category were :1) to improve significantly the health and social functions of mentally ill people; 2) to reduce the overall suicide rate by atleast 15% by the year 2000 from 1990 levels of 11/100,000; and 3) to reduce life-time suicide rate of severely mentally ill people by atleast 33%. The shifting of the locus of care from institutions to the community may have resulted in diminished care for suicidally prone person with the slackening of close observation available in the former. The UK's document placed the onus on doctors to bring suicide rates in both general population and in those with severe mental illness. This implied an assumption that the doctors have the ability and responsibility to prevent suicide. But doctors can do little to prevent suicide, unless they have contact with victims prior to the act. Unfortunately all potential suicides do not contact doctors.

Many studies have repeatedly indicated a high rate of medical contacts by the suicides in the period immediately preceding death. In series of 100 suicides 2/3rd visited their general practitioners in the month prior to death and 40% in the week before (Barraglouh et al., 1974). In addition one quarter were currently under the care of psychiatrists and above half of them had visited psychiatrists in the week prior to death. It is argued that the doctors are in the strategic position to prevent suicide and have an obligation to do so. Yet they appear helpless.

There are other reports which do not confirm these observations. Large proportions of suicides do not seek the help from their general practitioners. In a study of patients seeking treatment in general hospital in the departments other than psychiatry, it was concluded general hospital doctors are in a position to make a 'small but an important' contributions in reducing suicide rates (Elwood & De Silva, 1998). Suicides in this study received care from wide range of specialities including surgery, general medicine, orthopaedics,

gynecology, ophthalmology and accident & emergency services. Depression was a common mental illness in them and suicidal intention was present but not elicited. The recognition of depression and eliciting suicidal intention and referral to psychiatric care are essential steps. General practitioners and non-psychiatric doctors in General Hospital setting need to be trained in detection of depression and management or referral of patients under their care. This is the main function of 'Liaison' psychiatry.

PHYSICIAN EDUCATION

The importance of physician and general practitioner education in suicide prevention strategy cannot be exaggerated. An important study undertaken in Dutch island of Gotland involving intensive education of physicians in detection of depression and suicide prevention resulted in sharp decline in the number of suicides. When this decline was challenged by critics as a 'chance' occurrence, the study was repeated which again showed a fall.(Rutz et al., 1989).

Encouraged by this Gotland study an intensive postgraduate training programme on the diagnosis and treatment of depression was given in October, 1994 to general practitioners working in the town of Nagykaniza, in the Western part of Hungary. A preliminary analysis showed a substantial reduction of suicide attempts and completed suicides in the area served by the trained general practitioners (Rihmer, 1997). It showed an improved diagnosis and more successful treatment of mental disorders, especially of depression may be the principal factor in this favourable change. An interesting observation was made in Hungary that in the area with more number of physicians per 100,000 population there was better recognition and treatment of depression with lower suicide mortality than in those areas with lower number of doctors trained in depression detection. These again highlight the success of medical model approach.

Physician and General practitioners education in assessment of suicide risk may be organized through professional associations,

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Indian Medical Associations, Associations of Physician of India, since majority of general practitioners and physicians are members of these organizations. Additionally there should be more interaction between behavioural scientists especially psychiatrists and general practitioners through CME programmes and joint symposia. The basic need is to improve the quantum of psychiatry in the medical undergraduate curriculum. This should include suicide : its understanding and prevention.

ALCOHOLISM

Many studies have reported higher incidence of suicide attempts and suicide among the alcoholics. Alcoholism is a medical illness with psychosocial intertwining. These studies have been conducted from two angles - suicide in population of alcoholics and alcoholics in the population of suicide attempters (Agarwal & Gaskel, 1996). The risk of suicide is higher when the drinking starts early in life, when it is excessive and in dependent drinkers. History of alcoholism and depressive disorder in the family and life-time psychiatric diagnosis in the subjects are additional risks. Suicide in alcoholics is often precipitated by family crisis e.g. arguing with spouse, desertion or separation. Alcoholism, depression and anti-social personality disorder form formidable triad towards self-destruction (Black et al., 1986).

PRIOR SUICIDE ATTEMPT

An important avenue for suicide prevention is effective management of those who have made a suicide attempt (Deliberate self-harm). Risk for subsequent suicide is high in them occurring in nearly 20-25% of them. This finding has led to identification of the high risk group needing intervention. The features denoting high risk are the presence of depression, addictive behaviour and alcoholism. Unfortunately the rest of patients are likely to be left out as a low risk and intervention measures denied to them. This approach to target high risk excludes low-risk, groups which abound in the population. They too need attention (Kapur & House, 1998). The important measures include

limiting the availability of methods of self-harm, anti-depressants (over dosage more dangerous) paracetamol (common in UK) insecticides (common in India). The ambivalent attitude of subjects toward suicide (if help comes a change in decision occurs - 'to continue living') is taken advantage of in such situations and sufficient time is gained which makes these agents less accessible.

The deliberate self-harm individuals are known to be poor at solving interpersonal problems and possess fewer problem solving methods in their repertoire than equally depressed non-suicidal persons. 'Problem-solving treatment' may be more helpful than counselling against suicidality, psychiatric diagnosis or tackling external problems (D'Zurilla, 1986; Schotte & Clum, 1987). Deliberate self-harm may be a late expression of earlier child-abuse or severe failure of child care. It may at the same time indicate the existence of severe psychiatric disorder, relationship problems and/or drug 'abusing' experience. A high degree of suicidal intent, psychosis, depression, a sense of hopelessness and having unclear reasons for the act of deliberate self-harm are predictors of a high risk for later suicide.

PSYCHOSOCIAL

Strong ecological association between suicide/parasuicide with social and economic deprivation has been advanced. Measures aimed at tackling deprivation has proved more effective in reducing suicide rate than specific clinical intervention. It has been noted that as many as one in ten suicides is attributable in some part to unemployment. Farmers' suicides in recent times in India have been attributed to economic disasters. Other causes like ecological problems, weather failure, escalating prices and over-all vulnerability of farmers, liberalization and quality of pesticides are all blamed. In a Maharashtra study it was observed that 62 of 75 were Dalit suicides and lack of education and training in utilization of land was considered as causal. The failure of state and traditional farmers in this regard were held as contributory

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(Gail Omvedt, 1999).

The entire process or phenomenon of suicide is unlikely to be explained on medical model although there is a 'presence' of clinical illness in it. In some, psychological and social factors are additive or complementary to clinical illness while in others they may be dominant : for example in instances of loneliness and social isolation which may push a depressive to suicide behaviour. Similarly, availability of 'social-support' or its lack makes all the difference. A few decades ago the western opinion was that poverty ridden Asiatics would prefer to cling to life tenaciously than court suicide. This has been disproved and economic deprivation or affluence makes no difference in the final analysis. In affluent society factors other than poverty may be at work, like marital discord, divorce, alcoholism & in poorer countries unemployment, physical illness, depression, alcohol and drug use. The common factors in the both may be psychiatric illness and deficiency in social skills to cope with stress. Lack of social support may be more striking in the individual oriented western culture. According to a sociologist Paul Valery, 'suicide is the absence of others' (Fox, 1976). The problems of interpersonal relationship and poor problem solving behaviour are common in both cultures. There is an American saying that "suicide is a permanent solution for temporary problems" for some. Thus different strategies are called for different cultural situations.

Among the psychological features that predispose to suicidality is development of the trait of negative cognitive triad - a sense of helplessness (present) hopelessness (future) and guilt and worthlessness (past). Those who develop this life long attitude are liable to depression with hopelessness becoming the pathway to suicide. Their vision is tunnelled with failure to see the light at the end of the tunnel. The world appears black to them and there exist no gray areas.

YOUTH SUICIDE

The youth suicide has become a major

scourage. A self-harm in the youth may reflect drug problems, the low threshold for tolerance of day to day frustrations, unemployment and poor parenting (Council report, 1998). They may be the subjects of personality disorders like borderline or antisocial personality. Many of these problems abound among school and college students. Medical examination of students seldom takes into account their emotional and social problems. This neglected area needs to be addressed seriously by educationists. Besides 'sex education', emotional and social health are to be enquired into and tackled.

BEYOND CRISIS INTERVENTION

A leading US suicidologist a couple of decades ago threw a challenge to prove the usefulness of crisis intervention centres (Litman, 1970). Among those who call at the centres are 2 groups : one passing through crisis and other with chronic suicidality. The former benefit from crisis intervention while the latter proceed to complete suicide. Psychiatric diagnosis is invariable in the 2nd group and hence the extension of treatment beyond crisis intervention is necessary if prevention measures are to be successful in this more vulnerable group.

The 'samaritans' approach comprises : befriending, being non-judgemental, intuitive listening to the callers, confidentiality, non-referral to other specialists but allowing voluntary self-referral to specialists and most importantly a compassionate approach. There are around the world (including India) a large number of centres with voluntary workers. They have a impressive statistics - 22,900 volunteers, 184 branches 40 million hours of listening since their inception in the 50s, liaison with 131 UK prisons, rural communities and many young people (Slade, 1994). These figures would have risen by now. Chad Varah the founder of samaritans, believes that 'there is a potential within almost everybody to give emotional support to another person in distress.' Whether they have reached the 'high risk' persons is debated.

Crisis centres survive on the spirit of

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volunteerism. In the western countries, e.g. US Volunteerism is slowly being replaced by paid staff. An evaluation of the centres has indicated that their effectiveness in bringing down the rate of suicide in the community has not been established (Litman, 1996). It is shown that more people call to just 'vent, to feel support and to be heard' - rather than for actual problem solving.

AN INTEGRATED BIOMEDICAL PSYCHOSOCIAL MODEL

It may be seen that neither depression nor suicide behaviour is all biology. Measures aimed at biological factors like genetic predisposition, neuro-transmitter abnormality, treatment by anti-depressants alone can not counter the complication of suicide in the mentally ill. The medical approach is to be combined with appropriate psychological counselling, crisis intervention and socio-therapy and follow-up after crisis has resolved. While these are addressed at individual levels, socio-economic measures targetted to poverty, unemployment, the value system are to be attended to at macro level. Suicide is an avoidable and preventable tragedy in many instances. Its prevention should be everybody's business - the state, professionals, lay volunteers and the public.

In conclusion, there are many psychiatrically ill patients in therapy running different degrees of suicide risk. There are various levels where suicidally prone persons are encountered. Some of these are: Department of Psychiatry in General Hospitals, psychiatric hospitals, non-psychiatric departments of general hospitals, general practice, rehabilitation centres, department for treatment of deliberate self-harm, clinical practice of psychiatrists and clinical psychologists. The non-occurrence of suicide in them cannot be doubted. Suicide does occur in few of them, despite active treatment. The number of those who do not commit suicide are not available for statistical analysis. Nevertheless suicide in them has been prevented (Makinen & Wasserman, 1997). This needs to be accepted. These efforts operating at individual levels need to be extended to larger

section of vulnerable population.

Murphy's (1984) remark appears apt in this context : "If suicide prevention is successful the patient will live. A suicide will have been prevented. Yet to quantify this effect is impossible. It is important to realise that the absence of a suicide generates no data. Thus we can never prove what has been accomplished."

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