

## A MODEL FOR PREVENTION AND TREATMENT OF DEPRESSION IN DEVELOPING NATIONS

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Depression is an ubiquitous disorder with varied manifestations and afflicts people from every society. The illness constitutes a major public health problem because of its frequency of occurrence, the untold personal and interpersonal misery it causes and the severe socio-economic repercussions it usually entails. It is estimated that each year at least 100 million people in the world develop some form of clinically recognizable depression (Sartorius, 1975). Although enough knowledge exists today with regard to the understanding and control of depression, many depressives, especially in countries with poorly developed mental health facilities, either have no access to health care or remain undiagnosed or receive inappropriate treatment. Admittedly a lot has to be achieved in terms of developing programmes in these countries which would help to control the problem in the already ill population, through provision of better treatment and rehabilitative facilities and, perhaps more important, through programmes designed to prevent the occurrence of this disorder.

The psychopharmacological revolution of the 1950's has considerably optimized the outcome of depressive ailments. The availability of a range of antidepressant compounds has improved the therapeutic prospects particularly in developing countries where "standard" and 'scientific' psychological methods of

healing are largely unavailable. In addition to the primary problem of significant gaps being present in our understanding of the true nature of depression there also remains the problem of applying with appreciable effectiveness the knowledge already with us in order to achieve a significant reduction in human suffering caused by depression.

Indian literature attests to the fact that depression is a frequently encountered condition in the population although several issues with regard to the regional and domicile based differences in prevalence rates as well as symptomatology have yet to be satisfactorily resolved. This aspect has been discussed in detail elsewhere (Sethi and Sharma, 1984; Sethi and Chaturvedi, 1984). Apart from such controversies, the main issue in our country, and other developing nations as well, is the question of the method to be adopted for containment (therapy and prevention) of the illness, taking into account the modifying influences of the social and cultural factors and the limited resources, available in terms of manpower and facilities. Before proceeding on discussion of actual strategy it would be pertinent to discuss at this juncture some of those factors which besides having been found to be associated with depression appear to be most amenable to intervention; thus providing a new direction to prevention and therapy of depression in developing countries.

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## DEPRESSIVE ILLNESS AND FAMILY PATTERNS

Over the past two decades social scientists have expressed concern over the fate of the joint family when viewed in context of the rapid industrialization and urbanization that India is undergoing (Sethi and Manchanda, 1978). Some assert that this once-stable institution is undergoing fragmentation (Sethi, 1968 ; Sethi *et al.*, 1974) whereas others opine that "although structurally the traditional family appears to break down, functionally it is not so", and go on to add that the joint family is not disintegrating in order to function as independent units (unclear) but adopting to new patterns which have the same degree of jointness (Kaldate, 1962 ; Kapadia, 1966 ; Desai, 1956, 1964). Needless to say this controversy has proved to be a fertile ground for investigative research whereby attempts are being made to determine an association between family type, a change in its pattern and a possible impact on individuals in terms of psychiatric disorders.

A few studies indicate that the family structure may have a meaningful relationship with depressive illness (Lal, 1971 ; Sethi and Sinha, 1977 ; Bagadia *et al.*, 1973). Venkoba Rao (1970) while referring to parental loss and depression mentioned that the joint family system as far as it still exists in India may counteract the pathogenic affects of bereavement, but with the replacement of the joint family by the nuclear family late effects of early parental loss are to be expected. Lal (1971) studied 196 depressives and noted that majority of these patients belonged to a nuclear family. Venkoba Rao (1973) categorised 60 depressed patients as recurrent depressives, first attack depressives, and manic-depressives and observed significantly more jointness (Khatri's Scale, 1970) of family in the recurrent-depressives than in the first attack-depressives group,

while the manic depressive group occupied an intermediate position. In an earlier study by Sethi *et al.* (1979) involving 40 primary depressives and 60 secondary depressives they studied the family jointness by using Khatri's Scale, but did not find any significant difference in the two groups. However, in both the depressed categories a trend of patients showing aggregation towards nuclear family and away from a completely joint one was noted. No definite conclusions could be put forward as the sample size was rather small for this purpose.

In yet another study Sethi and Sharma (1980) evaluated family patterns in 100 primary and 100 secondary depressives and found that although a marginally significant difference existed between the two groups, this was not consistent for all grades of family jointness as recorded on Khatri's Scale (Khatri, 1970). However, when both the categories of depressives were seen individually an overall trend for loading of patients towards a nuclear family and away from a completely joint system was noticed. The latter observation tends to agree with our notion that depressive illness may be more frequent in nuclear family set-up rather than joint one. This however, has to be viewed with equation especially in view of the fact that the Khatri's Scale only rates the economic, residential and decision making aspects of a family and ignores the affectional interaction amongst members of the family, and which may well be the important factor contributing to the etiopathogenesis of depression. Furthermore it is our impression that a cross-sectional evaluation of a family does not really give a correct idea of the role of family in psychiatric disorders in general. For all we know patients who at any given point of time are found in a nuclear family may have lived a ma-

for part of their lives a joint family where some factors responsible for subsequent depression may have operated. In our opinion these last two areas need careful research as they are most likely to prove fruitful. We have already initiated steps in this direction (Sethi *et al.*, 1981; Sharma *et al.*, 1984) and results of some of our ongoing work should be able to provide information in a more comprehensive manner.

#### LIFE EVENTS AND DEPRESSION

The establishment of association of psychosocial stress with emotional health would depend on a variety of factors like an individual's capacity to absorb stress and the availability of social support. It is a common clinical interpretation that psychiatric patients frequently tend to perceive their environment differently and therefore find it difficult to cope with (Lipowski, 1977). In Western countries only few studies pertaining to relationship of life events and depression have been conducted by Cohen *et al.* (1954), Forrest *et al.* (1965), Paykel *et al.* (1969) and Patrick *et al.* (1978). There is striking dearth of reports related to life events and depression in Indian culture, although few studies have been conducted by Venkoba Rao (1970), Venkoba Rao and Nammalvar (1976), Sethi and Prakash (1980), Prakash *et al.* (1980) and Chatterjee *et al.* (1981). Employing a well structured scale for life events, Venkoba Rao and Nammalvar (1976) studied a total of 25 depressed patients in South India and reported that the depressives though experiencing the same number of life events as the controls, suffered more distressing events as indicated in the mean distress score. There was clustering of events during the two year period preceding the illness. In their further work Venkoba Rao and Nammalvar

(1977) matched the life events before and after the treatment in depression and observed persistence of high score even after the treatment. Sethi and Prakash (1980) studied a group of 40 primary depressives with Paykel's inventory and compared their life events from those of a control group consisting of an equal number of schizophrenic subjects. They reported that the depressives experienced a significantly higher number of life events than schizophrenics. Prakash *et al.* (1980) studied 100 primary depressives by using Paykel's inventory in 6 months as well as 12 months period preceding the illness and compared their life events from those of a control group consisting of an equal number of schizophrenic patients. They observed that more depressives than schizophrenics reported a higher mean of events to have occurred during the periods of six months and one year and the difference was highly significant. These findings are consistent with the observations made by Jacob *et al.* (1975). It would not be wise to generalise the findings since the study of life events is beset with difficulties of interpretation in different cultures. However, this direction of research does provide us some leads, on which we may develop modalities of prevention.

#### ROLE OF MALNUTRITION AND INFECTIONS

In a review of clinical psychiatry in Sub-Saharan Africa, German (1972) estimated that there was an organic or toxic contribution to psychiatric disorders in at least 50 percent of cases seen in Africa. In a similar vein Lipsedge and Littlewood (1979) mention that mental disorders in many developing countries are precipitated, aggravated and influenced by bacterial infections and vitamin deficiency. Similarly

it is also known that deficiency of certain vitamin B-Complex factors produce conditions like Pellagra and Beri-Beri where mental symptoms are not insubstantial. Malnutrition, especially of the protein deficiency type is usually accompanied by hormonal imbalance. What influence this imbalance may have on neurotransmitters (because of the close interplay between) and thus indirectly on mental disorders is yet to be explored. Research in psychoneuroendocrinology, however, clearly demonstrates the level at which the link operates (hypothalamic-hypophyseal), especially in certain categories of depression. Since conditions of malnutrition and infections are rampant in India and other developing nations one can only speculate, until detailed research, as to the relationship these conditions may bear to depressive conditions (like endogenous or vital depressives) where biological factors are said to play a major role in their etiopathogenesis. One can imagine that if such a relationship holds true then the prevalence of biologically determined depression would be quite different in populations where malnutrition and infections are rampant from those where they are not.

#### A MODEL FOR PREVENTION

In order to be in a position to suggest intervention at various stages of depressive illness it is inconvenient to discuss the issue in conformity with the accepted strategy of primary, secondary and tertiary prevention. Accordingly the ensuing discussion follows this pattern.

An effective primary prevention programme for depression will have to be community based and directed at reducing the incidence of the condition. Strategically two options are available—one is to remove causal factors and the

other to reduce the risk for vulnerable persons. Since not enough is known about factors (especially biological) which have a clear causal link to depression it would not be possible to exercise the first option. However there is relatively a stronger evidence available which enables identification of vulnerable population and risk factors, thus permitting intervention and achievement of primary prevention to some extent. In this context, our earlier reference to the relationship between the Indian family and depression assumes significance. We have already mentioned that the traditional Indian joint family is considered an excellent supportive environment for the emotionally vulnerable, economically weak or unemployed and the old and infirm. It is also said to protect individuals during adversity. Furthermore, such a pattern of living is ideally suited for a society like India which is predominantly rural and agrarian. This viewpoint, combined with the observations that the Indian joint family may be disintegrating in favour of a nuclear family as an accompaniment of the forces of industrialization and urbanization led us to investigate the relationship between the Indian family patterns and psychiatric disorders and also to be drawn upon the concepts inherent to the work of Henderson and associates (1977, 1978, 1979 and 1980) in regard to their investigation of social interaction of neurotic patients with members of their primary group. These workers were influenced by a number of investigators who have come to suspect that a lack of what is presently described as 'support' either directly results in psychiatric disorder or deprives the individual of an important buffer or cushion against stressful experiences (Henderson *et al* 1977; 1978 1979, 1980; Cassel 1974 a and b, 1976 Brown *et al* 1975; Dean & Lin (1977).

We were especially encouraged to look closely at the 'social network concept' because the common theme unifying it with the family studies was the concern with a commodity called 'support' and its source i.e. primary group in Henderson's work and family in ours (Sethi et al., 1981; Sethi & Sharma, 1982; Sharma et al, 1984)‡ Elaborating on this theme we may mention that support system is a group or social aggregate providing the individual with physical emotional or psychological and social supplies. It is a network of few or many persons who relate to the individual and buffer, reinforce or nurture him. Support systems enable mobilization of psychological capacities and inner resources and promotion of mastery, sharing or real life tasks and provision of extramaterial supplies, guidance and information. Such support system, can be observed in a joint family set up. Since there is major shift from joint family to unitary family system in our country, it has to be checked. Besides family, more organized nonprofessional support systems such as religious organizations also serve in these capacities. In addition, professionals can at times develop new support system for specific purposes.

In our present formulation of a preventive strategy for depression we shall focus our attention on the immediate social environment (i. e. the family and the primary group) and also the personality of the individual. Within the entire social network the most important component to an individual is his primary group\* and within the

primary group his family. The family provides for an enduring pattern of continuous or intermittent ties that play a significant part in maintaining the psychological and physical integrity of the individual over time. An individuals interaction with family members (or in a wider context with his primary group) provides the basis for formation of 'social bonds\*\*', which according to Henderson (1978) is an evolved and valuable component of human behavioural repertoire and now considered necessary for persons to maintain a reasonable degree of affective comfort and to operate effectively in the face of adversity. While social relationships almost certainly carry multiple functions, as described by Weiss (1974), one category which is assumed to have special reference to psychiatry is the provision of 'support'. This is precisely the commodity with which we are concerned and which would form an important part of our discussion with regard to the joint and nuclear family in relation to depression.

Central to our thesis that favours the joint family over the nuclear one is the concept that a large and closely knit kinship system, as represented by a joint family, allows for formation of strong bonds of emotional attachment with a large number of persons, group support and considerable social and economic support, all of which either have a positive influence on mental health, or protect vulnerable individuals from decompensating in adverse circumstances. Compared to nuclear family, a joint family is a better source of support

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\*Primary group is defined as being made up of all kin, nominated friends, work associates and neighbours (Henderson et al, 1978).

\*\*The anthropological and ethological term, social bonds refers to that range of relationships which connect an individual to those who make up his primary group. The bond may be primarily affectional, as with a spouse, a special friend, or close kin. It would be less affectional and more instrumental as one moves towards the periphery of the primary group (Henderson, 1980).

by virtue of it providing for a large number of attachment figures. The size of a person's family may be of significance in relation to certain illnesses. In general population the primary network usually consists of about 25-40 people (Hammer, Makiesky-Barrow and Gutwirth, 1978) and the degree of interconnectedness of network ties appears to be directly related to the duration of ties; that is, in networks where members are highly interconnected, ties tend to be long term (Hammer and Schaffer, 1975). This has obvious relevance to our supposition with regard to joint and nuclear family. In comparison to normative sample Pattison *et al.* (1975) found that primary networks of neurotics were smaller in size (about 10-12 persons), often including significant persons who were no longer living or lived away and the density or interconnectedness of neurotics network tended to be low in comparison to the normative sample.

It should now be clear as to why we consider the size of the family to be important. In India we are probably facing a situation where, due to the reasons mentioned in earlier part of the paper, an effective, spontaneous and a rich support system (represented by a joint family) is being replaced by a weaker substitute (represented by nuclear family). The consequent weakening and reduction in social bonds and concomitantly 'support' may be affecting the mental health of individuals. It should be emphasized that we do not wish to view in isolation the disintegration of the joint family and the resultant weakening of social bonds and support as having a causal role in the pathogenesis of depression. As we have asserted the associated factors of personality and adversity also have to be taken into account. It is quite possible that a person with a defective personality may

perceive his relationship with others as deficient in 'support', and thus a restricted social network, which in itself may not be particularly lacking in support may prove to be inadequate in maintaining the psychological health of the individual.

It is because of these interrelated factors that we feel that a wholesome preventive strategy should involve both the personality and social environment. Towards this objective we shall discuss the social measures which may be mobilized to provide effective support to vulnerable individuals. We may also offer brief comments on psychotherapy which though actually a component of secondary prevention, may be discussed here due to the immediate relevance to social measures for prevention that we are discussing here. We consider the social measures of primary importance in our framework because 'it is more feasible to attempt to improve and strengthen the social support rather than reduce the exposure to stressors (Cassel, 1976) or effect a change in other variables e. g. personality traits (Mueller, 1980).

We have pointed out that in the context of the changing Indian society and the predominant mode of family the vulnerable group as far as exposure to stressors, and weakening of support is concerned are those who undergo a change in their lifetime from a joint to a nuclear family. These persons can usually be identified by simple survey procedures. Alternatively attention may be focussed on groups who have recently migrated from rural to an urban area. Another vulnerable group would consist of people whose jobs require frequent transfer and uprooting of social ties and support systems. A different approach would entail educational programmes designed to educate the public with regard to the risks inherent to change of

jobs, residence, pattern of living etc. and how to protect against them. Special counselling cells may be set up to offer advice in this regard. In case persons or social groups who have been identified as undergoing some of the stressful situations listed above a comprehensive evaluation of the family situation would be required to assess the strength and weakness of the individuals and the group as a whole and interventions planned accordingly. For example if an absence of supportive family has been identified as a risk factor, then the support may sought to be provided through the assistance of neighbours, friends and work associates. It is important to explain to these individuals the importance of providing support to the vulnerable individual. Other community care giving agencies like physicians, social and religious groups may also be tapped to achieve a satisfactory level of social support. The measures advocated by us bear resemblance to the community psychiatry concepts evolved by Caplan in the text "Support systems and Community Mental Health". Caplan (1974) has proposed that the psychiatric disorders can be reduced by effective use of the supportive resources within a community.

In so far as the removal of malnutrition and infections and their contribution to depression as speculated by us, are concerned, they tend to reduce with the general improvement in health care and as such it is already being attempted through various national health programmes and need not be elaborated here. However, research which would correlate specific nutritional deficiencies and infections with depression need to be promoted and then specific preventive steps taken in this direction.

Secondary prevention is the next strategically important step in our over-

all plan to control depression this can be achieved through procedures which would promote early diagnosis and effective treatment of depression. The successful treatment of any patient of depression is a contribution to secondary prevention since his cure removes him from the pool of established cases. From the point of view of the community- however, the significance of removing one case from the residual pool depends on how many remain. Programmes of secondary prevention must therefore pay attention, not only to the traditional technical problems of diagnosis and therapy, but also to the logistics of maximum use of resources of workers and knowledge, so that the number of depressives whose illness is shortened will be large enough to make a recognizable difference in the prevalence rates of illness in the community. The fundamentals of an effective secondary prevention programme include; early referral, screening programmes and early and effective treatment of depressives.

An early diagnosis of depression depends on the extent to which the diagnosis skills have been developed and whether they are available at the place of contact between the population and health care agencies. Over the years considerable sophistication and accuracy has been achieved in the diagnosis of depression and these are being acquired not only by the psychiatrists but by other categories of medical personnel as well and thus increasing the pool of physicians capable of identifying the illness. In addition, the physicians are showing a greater readiness to diagnose depression probably because treatment is now more likely to be successful (Sartorius, 1983).

In developing countries, however, a change as mentioned above has yet to occur to an appreciable extent, even

though the number of untreated but treatable cases is far from trivial in these places. According to Sartorius (1983) there are many reasons for this, ranging from poorly trained health workers and scarce resources, hindering the provision of effective medicaments; to insufficient knowledge about the nature, frequency and management of depressive disorders. In order to overcome these constraints and at the same time facilitate better diagnosis and treatment of depression in developing countries, the World Health Organization has adopted a two pronged strategy. Firstly, major attention has been given to promoting the application in national health programmes of available knowledge through the development of decentralized mental health services integrated with general health services. Secondly, multidisciplinary research is being stimulated and coordinated, with the aim of bringing together scientists from different parts of the world and accelerating the process of acquisition of new knowledge.

The possibility of improving the treatment of depression in the context of general health care is being explored in the framework of a broader investigation of the possibility of introducing mental health components into primary health care service (Harding, 1977) & designing methods of training for specific tasks to be carried out by general health services personnel. This is an important strategical innovation in mental health care and needs to be pursued with vigour and determination. In India, specific steps have been taken in this direction with the adoption of a National Mental Health Programme. This programme is based on the concept of decentralization and deprofessionalization of mental health services. The plan calls for training of various levels of medical and paramedical professionals located at Primary Health Centre in basic mental

health skills including simple procedures for identifying cases of severe mental illness, including depressed and suicidal patients, institution of emergency measures; bringing such cases to the attention of Medical Officers and, if need be to psychiatrists.

The total mental health package as envisaged in the National Mental Health Programme has provision for tertiary prevention of illnesses as well. As planned-after the patient has received treatment, he goes back to the community, where maintenance treatment and followup is ensured through the liaison established between the medical officer and the patient through the established levels of health workers i.e. Multipurpose Health Workers and Community Health Workers. Maintenance medication is ensured with a regular supply of the drug, with the help of the Community Health Worker, who is basically a person residing in the area of the Patient. It is thought that the rehabilitation of the patient and his final adjustment in the community would be facilitated by the better awareness about depression and mental illness as such, by the educative influences of the health workers.

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