PSYCHOSOCIAL ASPECTS OF DEPRESSIVE DISORDERS

by

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ABSTRACT

Eisemann Martin: 'Psychosocial aspects of depressive disorders'. From the Department of Psychiatry, Umeå University, Umeå, Sweden.

The objective of this study was to elucidate the possible importance of factors from the social environment for the development of depression. As a theoretical framework, Engel's biopsychosocial model (Engel, 1980), based on systems theory, has been applied. Proceeding from the single individual (characterized by experience, personality, behaviour) as the highest level of the organismic hierarchy the following system levels have been taken into account: dyads, family, community, culture-subculture.

The depressive patients (n=111) showed to be living in a narrowed social network and to lack confiding relationships compared with a non-psychiatric control sample (n=98). The personality characteristics (e.g. anxiety, detachment, suspicion) of the patients were related to experienced loneliness, contact difficulties, social network features and leisure activities. By means of a discriminant analysis 83% of the subjects could be correctly classified. In a study of perceived parental rearing, depressives showed to have experienced lack of emotional warmth. As regards social class an overrepresentation of social class III in the subgroups of unipolar, bipolar and unspecified depression was observed.

Finally, implications for treatment are discussed in favour of a combination of drug and cognitive psychotherapy. Future research strategies are also suggested.

Key words: Depression, social environment, biopsychosocial model, social support, social networks.
"Psychosocial Aspects of Depressive Disorders"

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Key words: Depression, social environment, biopsychosocial model, social support, social networks.
To my mother
and in memory of my father
'Nicht allein das Angeborene, sondern auch das Erworbene ist der Mensch'

J W von Goethe
This doctoral dissertation is based on the following papers carried out at the Department of Psychiatry, Umeå University:


CONTENTS

INTRODUCTION 7
- Psychosocial factors in disease etiology 7
- Theoretical framework 13
- Aims of the present investigation 14

MATERIAL 17
- Patients 17
- Control subjects 18

METHOD 18
- Diagnostic classification 18
- Instruments 19
- Procedure 23
- Statistical methods 24

RESULTS 24
- Paper I 24
- Paper II 25
- Paper III 26
- Paper IV 26
- Paper V 27
- Paper VI 28
- Paper VII 29
- Paper VIII 30

GENERAL DISCUSSION AND CONCLUSIONS 31
- Implications for treatment 33
- Suggestions for future research 34

REFERENCES 36

ACKNOWLEDGEMENTS 46
INTRODUCTION

Depression can be regarded as one of the most common and most distressful illnesses afflicting human beings.

From a review of epidemiological investigations of affective disorders Boyd and Weissman (1981) estimated the lifetime risk for depression (subclinical depressive mood states and bipolar conditions excluded) at 8-12% for men and 20-26% for women in Western cultures. Figures from a 25 years prospective study on a total population in Southern Sweden by Hagnell et al. (1982) demonstrate an increase in lifetime risk of depression during the last decades. For males in the 20-39 years group with a moderate or severe depression the risk of exhibiting the disorder was ten times higher during the period 1957-72 compared with the period 1947-57. Klerman (1978) ascribed the increasing rate of depression partly to changes in the social environment, such as the breakdown of traditional social support systems (e.g. extended family), increased (often involuntary) geographical mobility, modern housing, and the stand back of religious institutions. Furthermore, people have higher expectations and demands on the psychiatric services for relief from distressing symptoms. The same author suspects that mankind in contrast to the post-war 'age of anxiety' has now entered an 'age of melancholy', precipitated by recent global events and repeated 'doomsday prophecies' about overpopulation, famines, ecological destruction and the threat of a nuclear holocaust (Grinspoon, 1982).

Psychosocial factors in disease etiology

The role of the social environment in disease etiology has been studied for quite a long time. Kraus and Lilienfeld (1959) investigated the health consequences of the termina-
tion of important social relationships. In their study of a young widowed group they showed that widowers have a death rate three to five times higher than married men of the same age. However, it was not before the mid 1970's that the concept of 'social support' was introduced by Cassel (1974, 1976). In his review Cassel (1976) presented strong evidence that social support had positive implications for health status, and served as a buffer against the effects of psychosocial or physical stress. Cassel based his assumptions on Frost's (1936) extended concept of host, agent and environment. He suggested that besides such general factors as nutrition, fatigue and overwork another category of environmental factors should be taken into account which could influence host susceptibility to disease agents from the environment, that is, 'the presence of other members of the same species'.

The primatologist Harlow and his co-workers (Harlow et al., 1960, 1966, 1974) have shown that attachment is a powerful 'primary drive' in its own right, just as hunger and sex are. For example, they showed that totally isolated monkeys tended to exhibit a depressive type posture, including behaviour patterns such as huddling, rocking, and self-clutching. Mason (1964) found that changes in group membership and in quality of relationships are accompanied by significant neuroendocrine changes affecting the pituitary, the adrenocortical system, the thyroid and the gonads.

Inspired by Lorenz's work on imprinting (Lorenz, 1945), Bowlby (1969, 1977) simultaneously and independently, pointed to the contribution of the environment to an individual's psychological development and well-being. He proposed an 'attachment theory' to describe the need of human beings to establish and to maintain affectional bonds to other people as well as to explain the variety of psychological impair-
ment such as depression, emotional detachment and anxiety in connection with loss and separation. Bowlby sees a strong causal relationship between an individual's attachment experience with his parents during infancy and his later capacity to form affectional bonds. He also believes that when social support, in the form of an attachment figure, is available early in life, people become more self-reliant and capable to function as supports for others.

Already at the end of the last century Durkheim (1883) noticed that 'social development rests on no other variable factor than the number of individuals in relationship and their material and moral closeness'. In their comprehensive follow-up study of more than 6000 Alameda County residents, Berkman and Syme (1979) applied a social network index including the number of close friends and relatives and frequency contacts. The age-adjusted mortality rate for the most isolated men was 2.3 times higher than for those with the most social contacts. The corresponding figure for women was even higher, i.e. 2.8 times.

In his review of a variety of studies covering the whole life cycle, Cobb (1976) found strong evidence that social support can protect people from a number of pathological states, e.g. low birth weight, arthritis, tuberculosis, alcoholism and depression. According to Cobb, 'social support begins in utero, is best recognized at the maternal breast, and is communicated in a variety of ways, but especially in the way the baby is held (supported). As life progresses, support is derived increasingly from other members of the family, then from peers at work and in the community, and in case of special need from a member of the helping professions. As life's end approaches, social support ... is again derived mostly from members of the family'.
Even politicians attached importance to the concept of 'social support'. In the USA, the President's Commission on Mental Health Task Panel on Community Support Systems (1978) concluded from a review of more than 200 studies that it was desirable to 'strengthen the natural networks to which people belong and on which they depend' in order to reduce vulnerability and risk and to increase social competence and sense of community.

When studying 'social support' the majority of current research workers apply the concept of social networks instead of the more restricted concept of dyadic relationships. The term social network was introduced by a British anthropologist when studying a Norwegian fishing village (Barnes, 1954). Barnes used concepts from mathematical graph theory to describe the individual's social field. As the interest in social networks has increased, so has the diversity of operational definitions. Cohen and Solokovsky (1978) defined social network relationships as 'all links within the preceding year with a frequency of at least once a month'. Tolsdorf's (1976) criteria were that members of a social network 'must know each other by name, they must have an ongoing personal relationship and they must have some contact at least once a year'. Shulman (1975) asked the respondents to 'name the people outside his or her household that he or she feels closest to'. Henderson and co-workers (1978) used the term 'primary group' - originally introduced by Cooley (1909) - which they characterized as 'those with whom one has interaction and commitment'. The concept of social network presents one way to examine the total social field within which the individual is living. According to Caplan (1974) social networks 'operate by mobilizing the resources of the individual, enabling him to master emotional burdens'. Social networks enable people to give and receive love and affection, to be dependent and be depended on.
Being part of a social network gives one self-esteem, raises one's self-confidence and maintains in this way psychological well-being and ameliorates psychological and/or physiological stress.

During the last ten years a series of studies have appeared comparing the nature of social relationships of psychiatric patients with those of controls. In their study of working class women, Brown et al. (1975) identified the 'lack of an intimate confiding relationship' as one of four factors which were associated with increased neurotic morbidity. When comparing the intra- and extrafamilial contacts of depressive patients with those of somatically ill patients, Blöschl (1976) found that the former reported a significantly lower number of contact-persons outside the family. Henderson et al. (1980) reported an association between the lack of available attachment figures (e.g. spouse, parents, siblings) and neurotic symptomatology. In a study by Winefield (1979) depressed women were found to report fewer confidants than did controls. However, the comparability of the findings from these studies is hampered by the utilization of badly defined diagnostic groups. In addition, most studies have been focused on neurotic patients.

One of the determinants of social behaviour which in this context is so far largely unexamined, are individual personality characteristics. They have important implications when discussing causality in studies of social networks. One of the common interpretations of the relationship between social network deficiencies and psychological dysfunction is that the former causes the latter. However, Henderson et al. (1978) suggested another plausible alternative. They proposed 'that patients are deficient in their primary group because they are deficient in the social skills necessary to establish and maintain it. Their personality attributes
might lead independently both to neurotic symptoms and to primary group deficiency'.

One of the determinants which are generally accepted as important for the shaping of an individual's personality structure, is parental rearing practices (Erikson, 1950; Newman & Newman, 1975; Albright, 1978; Murphy & Moriarty, 1976). Becker (1964) found that warmth and permissiveness result in an active, sociable, creative, independent and friendly personality. Parental hostility and strictness, on the other hand, promote neurotic symptoms and a socially withdrawn personality. In one of our studies on perceived parental rearing behaviour in depressed patients (Perris et al., 1983a) we found significant correlations between power assertive practices (punitive, overprotective, shaming, guilt engendering), lack of emotional warmth and aspects of socialization, anxiety and suspicion. In another study (Perris et al., 1983b) we investigated the personality traits in a series of depressed patients with a family loading for affective disorders and in sporadic depressives, classified according to the definitions given by Winokur (1978, 1979). The group with heredity loading differed significantly from the sporadic group on several personality aspects, suggesting an interaction between family loading with affective disorders and personality and perceived rearing practices.

Another factor from the social environment which has frequently been associated with depression, is social class. However, the results reported in different studies have proved to be inconsistent. Manic-depressive illness was first reported to be more frequent amongst the upper and middle classes (Stern-Piper, 1925). However, more recent findings do not support such a relationship (Weissman & Myers, 1978). Epidemiological survey studies report a somewhat higher prevalence of non-bipolar depression in lower social strata
(Weissman & Myers, 1978). Brown et al. (1975) reported higher rates of clinical depression among working-class women than among upper class women. In the study by Weissman et al. (1978), however, lifetime rates were higher in the upper social classes. The authors suggest that this is due to a longer duration of symptoms in the lower social class as a result of poor access to treatment. To exclude the possibility that results might be influenced by a decline in social class as a consequence of the depressive disorder, Birtchnell (1971) suggested studying the parental social class. This approach makes it possible to study the social mobility of the patients. So far, the findings on the impact of social class on depressive disorders are rather inconsistent. The usage of different and often poorly defined diagnostic criteria and definitions make comparisons difficult.

Theoretical framework

Some sixty years ago the biologist Paul Weiss (1925, 1977) introduced the concept of systems theory in biology in an attempt to harmonize empirical holism and practical reductionism. He elaborated the basic phenomenon that nature is built up as a hierarchically arranged continuum in which less complex units are superposed by more complex and larger units (systems). This theory was further developed by von Bertalanffy (1968) and by Engel (1980). The latter used systems theory as a basis for his biopsychosocial model of medicine that allows for the missing dimensions in biomedical model. The biopsychosocial model is 'per definitionem' a way of understanding disease phenomena which have to be seen as a dynamic product processed by the interaction of biological, psychological and sociocultural factors with each other and with the biophysical and psychosocial environment. In the past, emphasis was put on either biological, behavioural, sociological, psychoanalytical or existential
aspects, depending on which school one belonged to. The present model rejects the view that illness is caused by one single factor. Body and mind are seen as one entity. The human being as a whole is more than an addition of the parts. Figure 1 shows the hierarchical structure of nature, which in fact is made up of two hierarchies, i.e. with the individual (person) at the same time being the highest level of the organismic level and the lowest unit of the social hierarchy. Engel (1980) emphasizes the distinctive qualities and relationships of each level (system) which make methods and rules for study unique for that level, necessary. Figure 2 points to another important concept of living systems theory. Living systems are highly open and allow a steady flow of inputs and outputs of information across the boundaries. The figure also illustrates the complexity of the relationships between the internal and external environment. The interaction between the biological (organismic) and psychosocial system makes them both vulnerable for disruption. The vulnerability is varying with time since it depends on the actual status of the systems involved. This concept of individual vulnerability has been the theoretical framework of the research on depression carried out at our Department. Perris & Perris (1984) point to the probability that some of the interacting factors might 'have been operating long before the onset of the depressive breakdown'. They also stress the implications of the concept of individual vulnerability for treatment planning.

Aims of the investigation

The objective of the present investigation was to elucidate the possible importance of a set of factors from the social hierarchy (according to Engel, 1980) for the development of depression. Proceeding from the single individual (characterized by experience, personality, behaviour) as the highest
SYSTEMS HIERARCHY
(LEVELS OF ORGANIZATION)

BIOSPHERE

SOCIETY - NATION

CULTURE - SUBCULTURE

COMMUNITY

FAMILY

DYADS

PERSON
(experience & behaviour)

NERVOUS SYSTEM

ORGANS/ORGAN SYSTEMS

TISSUES

CELLS

ORGANELLES

MOLECULES

ATOMS

SUBATOMIC PARTICLES

Figure 1. Hierarchy of natural systems. Adapted from Engel GL, Am J Psychiatry 1980:137:537
Figure 2. Continuum of natural systems. Adapted from Engel GL, Am J Psychiatry 1980:137:537.
level of the organismic hierarchy, the following system levels have been taken into account: dyads (spouse, friend), family (children, relatives), community (acquaintances, leisure), culture-subculture (social class, parental rearing).

The specific hypotheses which have formed the bases for the different investigations are described in connection with the summaries of these studies. Within the theoretical framework of systems theory and within our concept of individual vulnerability we attempted a) to identify eventual interactions between different factors related to the occurrence of depressive disorders, b) to investigate whether socio-environmental factors differ in various diagnostic groups, and c) to discuss the implication of environmental factors for the treatment of depressive patients.

MATERIAL

A. Patients: The basic series comprised 111 patients (41 male and 70 female) with a mean age of 46.3 years (range 21-67 years) who were treated as hospitalized or out-patients at the Department of Psychiatry, Umeå University. They were consecutive patients. All patients consented to participate in a comprehensive study of depression in its biological, clinical and psychosocial aspects. Exclusion criteria were the following: older than 67 years, alcohol or drug problems as primary reason for treatment, a diagnosis of schizophrenia or cycloid psychosis, depression related to diagnosed brain damage.

For the studies on perceived parental rearing behaviour, data on some additional patients (total n=141) were available (papers VII and VIII). Due to missing data on some variables the Ns are differing.
B. Control subjects: The non-psychiatric controls were collected among consecutive patients consulting a primary care unit for minor somatic disorders. Subjects with a psychiatric diagnosis in their past history were excluded from the group. The control group consists of 43 males and 54 females ((with a mean age of 43.3 ± 11.7 years (range 20 - 70 years). For the study of parental rearing behaviour a series comprising of 205 healthy individuals collected on a previous occasion (Arrindell et al., 1985) has been used.

METHOD

Diagnostic classification

The hospital records of the patients participating in the comprehensive study of depression were scrutinized by two experienced psychiatrists who classified the patients according to current classification systems of affective disorders – DSM III (American Psychiatric Association, 1980), ICD-9 (WHO, 1977), Feighner et al's diagnostic criteria (Feighner et al., 1972), Multi-Aspects Classification Model "MACM" (Ottosson & Perris, 1973; Eisemann et al., 1980). For the purpose of the present investigations the classification of affective disorders used at our Department for research purposes was applied. The diagnostic subgroups taken into account were: unipolar, bipolar, neurotic, unspecified depression according to the definitions given by Perris (1973) and by d'Elia et al. (1974). These definitions might be summarized as follows:

a. Unipolar depression: patients who had suffered from recurrent episodes of depression (generally at least three), mostly of a psychotic severity with a symptom-free interval between the episodes.
b. Bipolar depression: patients who had previously suffered from at least one episode of depression and one of mania and who were currently depressed when entering the study.

c. Neurotic-reactive depression (RND): patients characterized by a vulnerable personality structure and a proneness to depressive reactions in case of adverse external events; mostly of non-psychotic severity.

d. Unspecified depressive disorder (NUD): patients who suffered from a depressive disorder either psychotic or non-psychotic but who did not fulfil the criteria for inclusion into any of the aforementioned groups.

Table 1. The series

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>sex ratio (M/F)</th>
<th>age (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unipolar</td>
<td>33</td>
<td>0.6</td>
<td>50.9 ± 11.2</td>
</tr>
<tr>
<td>Bipolar</td>
<td>22</td>
<td>0.6</td>
<td>43.5 ± 12.9</td>
</tr>
<tr>
<td>NUD</td>
<td>30</td>
<td>0.6</td>
<td>47.0 ± 13.3</td>
</tr>
<tr>
<td>RND</td>
<td>25</td>
<td>0.5</td>
<td>40.8 ± 15.3</td>
</tr>
<tr>
<td>Controls</td>
<td>98</td>
<td>0.7</td>
<td>43.3 ± 11.7</td>
</tr>
</tbody>
</table>

Instruments

For the different parts of the thesis the following instruments were used:

1. Assessment of leisure activities

For the assessment of leisure activities a specially constructed 'Leisure Activity Inventory' was administered. This inventory covers the following aspects: type of activity, frequency, place, presence of other people, and satisfaction
with the leisure activity.

2. Assessment of the social network, contact difficulties and loneliness

For the assessment of the social network a specially constructed and self-administered inventory was used. The fifteen questions of the inventory concern: sociodemographic data, availability of confiding persons, contacts with a) family members (not living in the same household), b) other relatives c) friends, and d) acquaintances. The subjects were asked to report 'regular' contacts, i.e. people they meet regularly at least on a monthly basis. The extent of contact difficulties and loneliness was measured by means of visual analogue scales which formed the last section of the questionnaire.

3. Assessment of personality

Two inventories measuring different aspects of personality were applied to the patient sample:

a) The Cesarec Marke Personality Schedule (CMPS) (Cesarek & Marke, 1968) is intended to measure eleven of the psychogenic needs suggested by Murray (Murray, 1938) and is based upon 165 questions to be answered 'yes' or 'no'. Psychogenic needs according to Murray are possibly secondary to primary viscerogenic needs such as hunger and thirst. The measured variables are:
(1) Achievement: need to accomplish something difficult and to rival and surpass others; (2) Affiliation: need to please and win affection of cathexed objects and to adhere and remain loyal to friends; (3) Aggression: need to revenge an injury, impulsive aggression and irritability; (4) Defense of status: need to maintain self-esteem by support and app-
roval from others; (5) Guilt feeling: guilt feelings and superego conflicts; (6) Dominance: need to dominate and to lead others; (7) Exhibition: need to expose oneself, to be in the center, to be noticed; (8) Autonomy: need for autonomy and independence; (9) Nurturance: need to help, nurse and take care of others; (10) Order: need for order, cleanliness and planning; (11) Succorance: need to be helped, nursed, supported and consoled. In earlier studies the CMPS has proved to give valuable, reliable and valid information (Strandman, 1978).

b) The second inventory used has been constructed for research purposes at the Karolinska Institute in Stockholm (Schalling, 1978; Schalling & Åsberg, 1981). The inventory is named KSP (Karolinska Scales of Personality) and is composed of subscales from personality schemes in use, e.g. the Sensation Seeking Scale (SSS) (Zuckerman, 1971) and the Impulsiveness-Venturesomeness-Empathy (IVE) inventory (Eysenck & Eysenck, 1978). The inventory comprises 135 questions grouped in the following 15 subscales: psychic anxiety, somatic anxiety, muscular tension, social desirability, impulsiveness, monotony avoidance, distance preference, psychasthenia, socialization, indirect aggression, verbal aggression, irritability, suspicion, guilt and inhibition of aggression. In an earlier study when patients were investigated when depressed and when recovered from their depressive episode (Perris et al., 1979) it was demonstrated that most of the subscales were fairly state independent.

4. Psychopathological rating

For the clinical assessment each patient was rated by means of the Comprehensive Psychopathological Rating Scale (CPRS) (Åsberg et al., 1978). For the purpose of the present study the Depression Subscale Score and the scores for two princi-
pal factors derived from the subscale have been used (Perris et al., 1984). Factor I corresponds to the core symptoms of the depressive syndrome and Factor II to a component of retardation.

5. Assessment of memories of perceived parental rearing practices

For this purpose the EMBU ('Egna Minnen Beträffande Uppförstran') (Perris et al., 1980), an 81-item questionnaire to be answered according to a 4-point scale, separately for the mother and the father, was used. This instrument, now available in ten different languages, has been successfully applied by other research workers (Ross et al., 1983; Clayer et al., 1984; Arrindell et al., 1983). Originally the items were grouped in 14 arbitrary subscales covering the following aspects of rearing practices: abusive, depriving, punitive, shaming, rejecting, overprotective, overinvolved, tolerant, affectionate, performance oriented, guilt-engendering, stimulating, favouring siblings and favouring subject. Two additional questions refer to a global judgement about the strictness of the parental rearing practices and to the extent to which they have been consistent. Subsequent factor analyses have led to the identification of the following three principal factors (Arrindell et al., 1983): 'rejection' (reflecting an assertive, punitive and rejecting rearing practice), 'emotional warmth' (including items referring to an affectionate, tolerant and stimulating attitude) and 'overprotection' (reflecting practices characterized by overinvolvement and overprotection). These factors have a satisfactory internal consistency and have also proved to be transferable across samples (Arrindell et al., 1985).
6. Social-psychiatric questionnaire

This questionnaire comprised a variety of socio-demographic variables such as: education, profession, profession of parents, civil status, number of children, sibship size, native place, changes of residence etc.

For the classification into social classes the profession-based criteria drawn up in the 'Låginkomstutredning' (Low Income Survey) (Johansson, 1970) have been used. According to this survey, 7.8% of the Swedish population belong to social group I, 34.7% to social group II and 57.5% to social group III.

Procedure

Immediately after admission and before any treatment was initiated the patients were rated by means of the Comprehensive Psychopathological Rating Scale (CPRS).

The other inventories and questionnaires were consistently administered when the patients had recovered from their depressive episode, i.e. in most cases during the last days before discharge from hospital. When appropriate (e.g. assessment of social network) the patients were explicitly asked to report the conditions existing prior to onset of their present depressive episode.
Statistical methods

The statistical analyses were carried out at the Umeå University Computer Centre (UMDAC) using SPSS standard programmes (Statistical Package for the Social Sciences, Nie et al., 1975, 1981). The significance of inter-group differences was tested by means of the Student's t-test, the Kruskal-Wallis analysis of variance or the non-parametric Mann-Whitney U-test, as appropriate.

Differences in distributions were tested by the Chi square test, with Yates' correction for continuity when the number of patients was small (Ferguson, 1959). Relationships between variables have been calculated as Spearman's rank correlation coefficients.

To statistically distinguish between samples on a set of variables a discriminant analysis was performed.

RESULTS

Paper I: 'Contact difficulties and experience of loneliness in depressed patients and non-psychiatric controls'.

There is empirical evidence from the literature, that loneliness and depression often co-occur (Russel et al., 1980). The purpose of the present study was to investigate possible differences in the experience of loneliness and contact difficulties between depressed patients and non-psychiatric controls. Furthermore, it was tried to elucidate the relationship between these variables and social network measures and severity of the depressive syndrome. The results show that depressed patients felt lonelier and suffered more from their loneliness than did controls. Among the diagnostic
subgroups the neurotic depressives scored highest. This group also reported most contact difficulties. For the depressives, the experienced loneliness and the number of regular contacts with family members were negatively correlated. In the unipolar and bipolar group even the number of friends was negatively correlated. In all groups there was a positive relationship between contact difficulties and suffering from loneliness. There were significant correlations between severity of the depressive syndrome and the extent of loneliness suggesting that loneliness not only precedes but also produces symptoms. For a further elucidation of this issue it is finally suggested to study the relevance of personality characteristics in this context.

Paper II: 'Leisure activities of depressive patients'.

The objective of this study was to explore the leisure behaviour of depressed patients and their possible relationships to personality characteristics. Based on the observation that depressed patients have a restricted social network they were expected to engage in fewer leisure activities and to be associated with fewer people during these activities than controls. The results supported these hypotheses. The controls were engaged in significantly more leisure activities than were the depressives. The former conducted also more activities involving other people and more activities occurring outside home. As concerns personality, the 'achievement' scale from the CMPS was correlated with activities which were active, involving others and done daily. The scales measuring 'defense of status', 'succorance' and 'passive dependence' were negatively correlated with most types of leisure activities. Similar relationships were observed for the KSP scales 'detachment', 'psychic anxiety', 'somatic anxiety' and 'psychasthenia'. 
Paper III: 'The availability of confiding persons in depressed patients'.

Social support has increasingly attracted the attention of research workers. The original finding by Brown et al. (1978) that 'lack of an intimate confiding relationship' was a vulnerability factor for psychiatric morbidity was confirmed by subsequent investigators (Miller & Ingham, 1976; Roy, 1978, 1981; Winefield, 1979). The aim of the present investigation was to re-examine these earlier findings and to extend these studies by classifying the patients into well-defined diagnostic subgroups of depression. Throughout, the depressed patients reported the presence of confidants both within and outside the household to a significantly lower degree than did controls. The only exception were the bipolar patients who had about the same availability of confidants outside the household as the control group.

As important factors for the understanding of the mechanisms behind the capability of eliciting social support, 'ego functioning' (Flaherty et al., 1983) and the size of the social network are suggested.

Paper IV: 'The relationship of personality to social network aspects and loneliness in depressed patients'.

The role of personality in depression has been given considerable attention in the psychiatric literature. Attempts have been made to find predisposing personality patterns. Hirschfeld & Klerman (1979) found depressive patients scoring higher on introversion, neuroticism, obsessionality, solidity and stability than normals. According to von Zerssen (1976) the 'melancholic type' was, among others, characterized by a dependency on close personal relationships. In
his review article Akiskal et al. (1983) regarded 'introversion' to be the trait with the 'strongest evidence to predispose' to depression. In the past social disintegration has been associated with mental illness (Chen & Cobb, 1960). More recently the social networks of psychiatric patients have been studied both quantitatively and qualitatively (Tolsdorf, 1976; Miller & Ingham, 1976). In a previous article (Eisemann, 1984a) it was suggested to investigate possible relationships between personality characteristics and the experience of loneliness, contact difficulties and social network aspects. The present paper complies with this suggestion. The results show that patients with a personality characterized by somatic and psychic anxiety, detachment, psychasthenia, irritability and inhibition report a limited number of friends. This possibly suggests that making friends requires a more well-functioning personality than associating with relatives. Even regarding loneliness and contact difficulties the scales reflecting anxiety and psychasthenia correlate most strongly. In addition, there is a positive relationship between 'suspicion' and suffering from loneliness. Our results point to the importance of personality traits for the understanding of the social behaviour of depressive patients.

Paper V: 'Depressed patients and non-psychiatric controls: discriminant analysis on social environment'.

The interest in the social environment as a possible factor in disease etiology dates back to the end of the last century when Durkheim (1883) pointed to the importance of social relationships for the social development. In more recent studies associations were found between deficiencies in the social environment and psychiatric morbidity (Post, 1962; Blöschl, 1976; Brown et al., 1978). In the present study we tried to distinguish between depressed patients and
controls on a variety of social variables (N=11) by means of discriminant analysis. From the eleven original variables nine were retained in the following order of their entrance: feeling of loneliness, confiding persons within household, number of family members (regular contact), number of leisure activities involving others, number of relatives (regular contact), confiding person outside household, size of household, civil status, number of friends (regular contact). By means of the discriminant function as much as 83% of the subjects could be correctly classified. The results indicate shortcomings in the social environment of depressives reported in earlier studies (Eisemann, 1984a,b) and underline the discriminating power of such factors.

Paper VI: 'Social class and social mobility of depressed patients'.

Studies on the relationship between social class and depression have yielded divergent results. Some authors (Stern-Piper, 1925; Hollingshead & Redlich, 1958) found higher proportions of depression in higher social classes whereas others (Birtchnell, 1971; Brown et al., 1975; Weissman & Myers, 1978) established greater prevalences of depression in lower social classes. So far little attention has been paid to the possible variations of social class among different diagnostic subgroups of depression. To overcome this shortcoming the relationship of social class to distinct depressive subgroups was studied. To exclude the possibility that the results are influenced by a decline in social class as a consequence of the depressive illness the social class of the family of origin was also assessed. By this approach it was possible to scrutinize the social mobility of the subjects. The results show that social class III is overrepresented in the unipolar, bipolar and unspecified group compared with figures from the general population. Within the
depressive subgroups the unipolars show an overrepresenta-
tion of social class III compared with the neurotic depres-
sives. As regards the parental social class there are no
significant differences between the samples. The unipolar
and the bipolar patients are significantly more downwardly
mobile than the other groups. The latter result is in con-
tраст to the findings of other studies (d'Elia et al., 1969;
Weissman & Myers, 1978; Woodruff et al., 1971; Welner et
al., 1979).

Paper VII: 'Perceived parental rearing and depression'.

During the last years there has been a shift in the study of
parental deprivation in depressed patients. Earlier studies
had focused on quantitative aspects of deprivation (parental
loss) during childhood (for a review see Granville-Grossman,
1968) whereas in recent investigations it is suggested that
qualitative aspects should be taken into account (Raskin et
al., 1971; Parker, 1979; Perris et al., 1980; Jacobson et
al., 1975). Both Jacobson et al., (1975) and Parker (1979)
found that depriving childrearing practices were related to
adult depression. To test the hypothesis that depressed
patients would report more negative and depriving rearing
practices from their parents than would controls, the EMBU,
a Swedish instrument aimed at assessing the experience of
parental rearing attitudes was applied. The following three
factors, obtained from factor analysis and suggested by
Arrindell et al., (1983), were investigated in the present
study: 'rejection', 'emotional warmth', 'overprotection'.
The results show that patients in all diagnostic groups sco-
red lower than the controls on 'emotional warmth' and this
applied to both parents. However, statistical significance
was only obtained for the unipolar and unspecified group.
The same tendency became apparent for the factor 'maternal
overprotection'. The depressives tended also to rate their
parents as less consistent in their rearing attitudes. In a discriminant analysis the factors maternal emotional warmth and maternal overprotection allowed 64% of the total patient sample and 72% of the unipolar depressives to be correctly classified. These results, like those of previous studies, support the hypothesis that deprivation of love during childhood represents an important psychological background factor for depressive disorders.

Paper VIII: 'Perceived parental rearing practices in depressed patients in relation to social class'.

One of the background determinants of child-rearing practices reported in the literature is the social status of the parents. A number of authors (Sears et al., 1957; Jonsson & Kälvesten, 1964; Nettelblad et al., 1981) regarded the parental style of lower social classes as more authoritarian, more punitive, and less stimulating than that of the middle class. Other authors (Kuhn, 1959; Perrez et al., 1981) could not verify these differences. However, none of these previous studies addressed the issue as to whether differences in 'emotional warmth' do occur in the parental rearing practices of different social classes. Since possible differences in rearing practices between social classes could bias the interpretation of our previous findings in depressed patients the present study was carried out to investigate such differences in our sample. The results reveal no differences in the perception of 'emotional warmth' experienced by patients grown up in different social milieus. On the other hand subjects from higher social classes scored their parents as more rejecting and overprotecting. These aspects have not been considered separately in earlier studies, but might be of relevance as a risk factor for depression (Perris et al., 1984; Arrindell et al., 1984).
GENERAL DISCUSSION AND CONCLUSIONS

There has been a number of studies, reported in the medical literature, on the relationship between psychosocial factors and health in general (Cassel, 1976) and mental health in particular (Greenblatt et al., 1982). In most of the studies the 'social support' derived from social relationships (networks) has been regarded as the crucial variable in this context. However, the lack of agreement about operational and conceptual definitions complicates the comparison of studies in which the empirical effects of 'social support' on health has been investigated. There seems to be some evidence suggesting that individuals lacking an adequate proportion of 'social support' are at higher risk of morbidity. A number of studies have shown that depression was associated with impoverished social networks and lack of 'social support' (Blöschl, 1976; Roy 1978, 1981; Winefield, 1979). However, the mechanisms behind these observations are, so far, poorly understood.

The different parts of the present investigation have been conducted in an attempt to shed some light on this issue. There are a few indications from the literature on how depressives look at the members of their social network e.g. what demands they have on them. Bibring (1968) has pointed to the specific dependency of depressives on their social relationships, having exceptionally high demands on their attention and affection. The study by Libet and Lewinsohn (1973) suggests that depressed patients concentrate their social life on a single relationship. Under such circumstances any neglect from the side of this person leads to increasing frustration.

In his theory of depression Becker (1964) focuses on the ego and on the social determinants of self-esteem. According to
Becker self-esteem is derived and nourished by a meaningful life which in turn depends on satisfactory social interactions ('games') with others ('objects'). He regards loss of self-esteem, game-loss and object-loss as inseparably part of meaning-loss. However, Becker gives primacy to game-loss since he considers object-loss as not crucial per se when there is a possibility of obtaining esteem and affirmation from a variety of objects. In this way he expanded the 'battlefield' of dynamic forces from the intra-psychic to the social area.

Some findings from the present study support Becker's view. If leisure activities can be seen as one of the potential areas where 'games' can be played, depressives seem to be handicapped. The results of the present study point both to a reduced overall activity among depressives and to a preference of leisure activities not involving other people.

The significant correlations between the experience of loneliness and aspects of social network size indicate that even quantitative measures have implications for the quality of social support available.

The application of Engel's biopsychosocial model (Engel, 1980) based on systems theory gives the possibility to see depression as a product of a dynamic process of forces from different structures from the living system. Starting in childhood the results show a lack of perceived emotional warmth (corresponding to Bowlby's 'emotional attachment') amongst the depressed patients. That these results cannot have been biased by possible differences in the social class of their parents is confirmed by the findings from the study on perceived parental rearing and social class.

Results from one of our earlier studies (Perris et al.,
1983) pointed to the relation between perceived emotional warmth during infancy and personality characteristics (e.g. socialization, psychasthenia, suspicion, anxiety) in adulthood. The numerous relationships which have been found in the investigation on personality and loneliness and social network features stress once more the importance of personality traits for a better understanding of the social behaviour of the depressed patients.

One of the obstacles of being able to compare studies of other authors on this subject has been the utilization of badly-defined diagnostic groups. The numerous differences on a variety of variables between the well-defined diagnostic subgroups in the present investigations point to the necessity and usefulness of such an approach.

**Implications for treatment**

If the importance of social relationships as a mediator of social support is accepted, some re-orientation in the theory and practice of mental health professionals is required. The emphasis on intrapsychic explanations and therapies on the one hand and on drug therapy on the other hand, must be curtailed in favour of an interpersonal orientation aimed at the development of social skills. Admittedly, antidepressive drug treatment is effective in the acute phase of depression. In addition, the prophylactic effects of lithium in the treatment of recurrent affective disorders have been demonstrated (Schou et al., 1970; Smigan, 1984). However, there is still a significant number of patients responding incompletely to drugs or who are even resistant to therapy (de Francisco, 1979; Freyham, 1979). There is growing evidence (Kovacs et al., 1981; Blackburn & Bishop, 1983; Teasdale et al., 1984) that a combination of drug and psychotherapy is very likely the most effective treatment of depres-
sion. Results from the present study point to the suffering from loneliness among depressives. Young (1982) outlined a systematic framework for the understanding of loneliness and for the treatment of socially isolated people. He pointed to the importance of cognition, behaviour and emotion in defining and treating loneliness. Young regarded the concomitant behaviours and emotions of loneliness mainly as a function of the individual's thoughts, attributions and assumptions. After having understood why lonely people act and feel as they do it could be possible to help them to overcome their loneliness by applying cognitive behavioural techniques. A prerequisite for this treatment is a thorough assessment of the patient's social network by means of a standardized instrument which should become a routine procedure.

A future objective for mental health workers could be to identify individuals and groups at high risk by virtue of their lack of social relationships and to determine the necessary and suitable form of social supports that can and should be strengthened in order to protect such persons from disease manifestations or relapses. For example, in the Soviet Union where life, to a much greater extent than in Western societies, is built up on the collective, the mental health workers often use members of the collective for therapeutic interventions such as for visiting depressed patients to break or prevent isolation and detachment (Zifferstein, 1976).

Suggestions for future research

Since there is some evidence (Sokolovsky, 1978) that the impact of social relationships may vary between different types of mental illnesses, in future studies a group with another psychiatric disorder should be included. Without the inclusion of such a control group, it is difficult to iden-
tify those factors that render the person at risk for any psychiatric disorder from those for depression specifically.

So far, most of the research is retrospective, which makes it difficult to sort out consequences from causes. Prospective, longitudinal studies should be conducted to confirm an etiological role of social relationships. In this context the following issues could be examined: the predictive value of social network characteristics, association of changes in social network with changes in psychopathology between assessment periods.

Another important area of investigation would be the study of the interaction between factors from the psychosocial and the biological (organismic) systems. E.g. how changes in the social environment are accompanied by neuroendocrinal changes which in turn, affect among others, the adrenocortical pituitary system. According to Schoenheimer (1942) these endocrine substances are responsible for the maintenance of the 'dynamic steady state' of the organism, which can be threatened by disease agents of biological or social origin.
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