The field of depressive illness has attracted the attention of many research workers and various kinds of studies are being carried on. So far as the field of Prognostic Studies is concerned, it is being done in different ways. Some authors have tried to study the relationship of diagnosis (Endogenous Vs. Neurotic) to the prognosis, while others have approached the problem from the standpoint of clinical features and facts from personal history of the patient. Besides, there are some drug trials which try to relate the drugs to the different diagnostic categories. A short survey of all these types of studies is presented here.

Patridge (1949)'s study shows the differential effect of Leucotomy in Endogenous and Neurotic depressives. The symptoms of depression persisted after operation in 20 out of 61 cases of endogenous depression but in none of 21 cases of reactive depression.

Pippard (1955)'s study also showed the same trend - good response in reactive depression. There was good response in 10 out of 30 cases of endogenous depression. But the difference has not reached the statistically significant level.

Sargant (1961) also emphasized that results of Leucotomy are better in case of reactive depression - that is, in patients who are nervous and tense and who are thrown into depression by difficulties of external life.

Ball and Kiloh (1959) classified the Depressives into Endogenous and Reactive or Neurotic groups. They found that 74% of the 27 endogenous depressive patients improved compared with 59% of 22 reactive depressives. This difference is shown by Chi-
Kiloh and Ball (1961) carried on a double blind trial of Imipramine upon patients suffering from depressive states. It was found that patients diagnosed as suffering from endogenous depression made a significantly better response to drug than those regarded as showing neurotic depression. A discriminant functional analysis was carried out on data from 97 patients, all treated with Imipramine, which showed one cluster of symptoms correlated positively and second cluster of symptoms correlated negatively with good response to Imipramine. The first cluster included items which may be regarded as endogenous depression and the second cluster included items accepted as features of neurotic depression.

Rose (1963) classified patients in endogenous and reactive depression. He found that endogenous depression group have favourable outcome with ECT. But in his work, he found no significant difference in male population. In female population, there was a significant difference. Calculations based on total population also showed significant difference in outcome with ECT in endogenous and reactive depression.

Abraham et. al. (1963) studied 80 patients, treated with Imipramine. Their study did not support the widely reported finding of a better response to Imipramine in endogenous than in reactive depression.

But as early as 1934, Lewis had argued against the validity of this classification. He maintained that all cases have both endogenous and reactive element and it was impossible to draw...
VALIDITY OF CLASSIFICATION NEUROTIC VS. REACTIVE DEPRESSION

Lewis (1936), in his well-known prognostic study of melancholia, was unable to establish any consistent prognostic signs. In his study of 61 patients, no feature or combination of features clustered at either end.

Kiloh and Garside (1963) calculated the product-moment correlation of 35 clinical features. And simple summation factor analysis was carried out. Two factors were extracted. The first factor was a general factor and loading here indicated the extent to which each feature is related to all the features as a whole, while the second factor indicated strong positive loading with clinical features accepted as characterizing neurotic depression and strong negative loading with clinical features characterizing endogenous features. Of 143 patients, 92 were diagnosed as more definitely suffering from endogenous and neurotic depressions. Correlation co-efficient were calculated between diagnosis in 92 cases and clinical features. A very high correlation was found between factor loading and these correlation co-efficients. Cases of endogenous depressives responded better to ECT than neurotic depression. So, according to Kiloh and Garside (1953), in effect of physical treatment, the dichotomous nature of depressive illness is more apparent.

Grinker et al. (1961) and Friedman et al. (1963)'s study did not produce factor similar to Kiloh and Garside.

McConaghy et al. (1967) tried to carry on a replication of the study of Kiloh and Garside. They extracted two factors by
principal component factor analysis on data of 40 clinical features of 100 outpatient depressives. Neither of the two factors differentiated the clinical features to characterize neurotic and endogenous depression. Then, to avoid the effect of extra variation caused by large number of clinical features, the factor analysis was carried on eight clinical features, considered most likely to differentiate two types of depression. Again, neither of the first two factors showed such differentiation.

According to McConaghy et al. (1967), the difference in result may be due to interviewer's bias due to previous diagnosis. The results of Kiloh et al. (1962) were obtained with patients re-diagnosed after their response to treatment was known and so are open to the possibility of unconscious bias. The difference in results may also be due to patient selection. In Kiloh et al. (1962)'s study, only 92 out of 143 patients were investigated.

Kay et al. (1969) carried on a principal component analysis of symptom of 104 patients collected from records of patients of psychiatric depression of Northumberland and North Durham (1957-59). The analysis led to extraction of first factor interpreted as endogenous Vs. neurotic depression and the factor accounted for 20% of the variance.

Kendell et al. (1970) carried on discriminant function analysis to demonstrate that endogenous and neurotic depressions are distinct. 63 neurotic depressives and 115 depressives were studied. The data was obtained by standard clinical interview of consecutive admission. The functional analysis was based on a priori Chi-square comparison between two population. Inspite of
these and other refinements (above Kendell's 1968 study), the distribution of weight scores of 178 patients, as the discriminant function was unimodal and did not differ significantly from normal population.

But according to Eysenck (1970), disagreement between workers such as those of Newcastle group (Kiloh and Garside 1963), Carney, Roth and Garside (1965) and London (Maudsley) group (Kendell 1968) is irrelevant and is based on a misunderstanding of statistical property of factors. According to Eysenck, it is necessary to discriminate between two different uses of factor analysis: 1) Factor suggesting a hypothesis 2) Factor supporting a hypothesis. Kendell's objection is applicable to first and not to second. Moreover, argument from unimodal and bimodal distribution of patient's weighted scores is applicable to the problem of categorical Vs. dimensional approach to classification of depression and not to the unitary Vs. binary classification of depression.

Kiloh et al. (1972) carried on a work to replicate the study of Kiloh and Garside (1963). Principal components analysis of original new data gave similar factors. Taking into account Eysenck (1970)'s criticism, they maintained perhaps endogenous depression is categorical and neurotic depression is dimensionally distributed.

Paykel (1971) studied 165 depressives and carried on Multivariate cluster analysis on the data. The results indicated a hierarchical structure of groups. At the first level, there were two groups - one older - more severely ill, one younger and mildly ill.
Subsequent division of each of these produced four groups. One group was characterised by severe illness, sometimes with delusions, a background of good premorbid adjustment and corresponded to psychotic depressives as described in the literature; a second group consisted of moderately depressed patients with a strong admixture of anxiety, a high incident of previous illness and high neuroticism scores.

A third group comprised depressives with a considerable element of hostility and the last group contained young patients whose relatively mild illness developed on a background of personality disorder.

Paykel (1972) tried to study the relationship of this typology and response to Amitriptyline. Improvement was measured by studying change in global rating of severity (1-7 rating scale) after four weeks of treatment. Multivariate discriminant analysis was carried out using 65 patients and four groups from earlier study (1971). New individuals of present study were scored on canonical variates and assigned the group on the basis of derived cut-off points.

The change score differed significantly at 5% level between the four groups. All groups showed some improvement.

Psychotic Depressive - initially the most severely ill, improved most.

Anxious Depressives - although initially a little less severely ill, improved much less and showed the most residual illness of all groups at the end of treatment.

Hostile Depressives and Young Depressives with personality disorders, least ill to start with, showed intermediate improve-
ment and were least ill but by a smaller margin at end of the treatment.

Clinical diagnosis of psychotic Vs. neurotic was also used to classify the patients. These assignments overlapped with the cluster analytic typology. Psychotic depressives correlated in both typologies, while Anxious depressives, Hostile depressives and Young depressives with personality disorders all tended to be diagnosed as Neurotic depressives. And this dichotomy did not significantly predict improvement.

Patients were also assigned to the three groups of retarded, anxious and hostile depressives, previously described by Overall et al. (1966). This typology overlapped, though weakly, with the four-group typology. Prediction could not be tested adequately since there were very few retarded depressives in the sample.

It is clear that results of the studies about classification of illness are conflicting and their findings about the relationship of diagnosis to treatment also do not agree.

Rose et al. (1967) compared Desipramine with Imipramine in a double blind controlled trial on 60 patients suffering from primary depressive illness and classified etiologically into reactive and endogenous depression (depending on the presence or absence of relevant precipitating factors).

In overall score and individual score, both drugs had similar property. Reactive and endogenous depressions responded equally well to the either drug.

Abraham et al. (1963) summarised the literature to that date as: "The general consensus of opi-
nion in literature today is that Imipramine has its best effect in depressions of an endogenous rather than neurotic type. But their study on depressed out-patients did not support this conclusion.

Browne et. al. (1963) working with inpatients reported that reactive depressives showed a better response to Amitriptyline than did endogenous depressives.

Burt et. al. (1962) in their report of response of 73 depressed female in-patients treated with Imipramine or Amitriptyline demonstrated a much better response to both drugs by reactive as compared with endogenous depressives.

Speer et. al. (1964) found no significant difference in respect to endogenicity in the response of depressed in and out-patients to Trenylycypromine and Imipramine.

Richmond and Roberts (1964) reported that out-patients suffering from endogenous depression responded much better to a variety of anti-depressant drugs than did those suffering from reactive depressions.

Carney and Shefield (1972) studied 97 patients treated with ECT and followed up to three months. Patients were rated initially on the Newcastle diagnosis and ECT prediction scale and Hamilton scale. After ECT and at 3 months, they were rated on a four-pointed global scale and Hamilton scale.

Patients classified as endogenous had a significantly better outcome, at three months, as judged by Hamilton's and global scale, than those classified as neurotic. Patients for whom good outcome was predicted by ECT Scale also had a significantly better outcome as judged by the two assessment methods.
than those for whom a poor outcome was predicted.

Mendel (1965b) found that most of depressed in-patients
he studied showed a mixture of neurotic
and endogenous symptoms (p. 683); individu-
dual and clinical features considered to characterize endogenous
depression showed no correlation with response to ECT. Some cli-
nical features considered to characterize neurotic depression
correlated with poor response. These features were mainly those
present before onset of illness, e.g., inadequacy; emotional
liability and neurotic traits in adult life.

According to McConaghy et. al. (1968), attempt to relate
prognosis to individual clinical features is likely to provide
more reliable data than that provided by past attempts to relate
prognosis to classification of patients as suffering from endoge-
nous or reactive depression. But these type of studies are avail-
able from a period much before this.

Lewis (1936), in his well-known prognostic study of melancho-
lia, was unable to establish any consistent prognostic signs.

Hobson (1953) recorded the presence and absence of 21 cli-
nical items in 127 in-patients at Maudsley Hospital. Features
which proved to be significantly correlated with good outcome were
sudden onset, good insight, obsessional personality, self-reproach
and short duration. Those indicating poor outcome were hypochon-
driasis, depersonalization, emotional liability, neurotic traits,
hysterical attitude to symptoms, above average intelligence and
fluctuating course. Prediction of outcome of illness based on
these correlates proved successful in 79% of the cases.

Robert (1959) investigated 50 women aged 40-60 years.
suffering from depressive illness, regarded as justifying treatment with ECT. He used Hamilton's Scale for measuring depth of depression. The symptom scores were obtained for each patient before treatment and after one month and three months of treatment. He confirmed that Hobson's clinical item scores was of value in predicting outcome and also that patients with high initial symptom score tended to respond better to treatment.

But Hordern et al. (1963) found that Hobson's scale score (1963) had no predictive value with either drug.

Kiloh et al. (1962) studied 97 depressives (38 cases regarded as suffering from endogenous depression and 59 from neurotic depression). They were all out-patients and more severe varieties of depression were necessarily excluded. All were treated with Imipramine. Altogether 60 items were assessed and 36 were included in calculation. A discriminant function analysis was carried out on data and weight co-efficients were obtained for items which discriminated best between those cases responding and those failing to respond to imipramine. Age over 40, a quality difference of depression from normal, weight loss greater than 7 lbs., an insidious onset, duration under one year, early waking were positively correlated with good response and presence of precipitants, more intense depression, self pity, subjective retardation, history of suicidal attempt, irritability, failure of concentration, hypochondriasis, hysterical features, restless sleep were negatively correlated with good response. According to Kiloh et al., features positively correlated are characteristics of endogenous depression while features negatively correlated are characteristics of neurotic depression.
J. Mendels (1965a) carried on an investigation into the relationship between the response of depression to electroconvulsive therapy and the presence of 30 clinical features. The study revealed that only four features were associated with outcome at both one and three months follow-ups. Emotional liability, inadequate or illadjusted premorbid personality, precipitating factors and a history of neurotic traits in adulthood were significantly related with poor response with ECT. None of the clinical features commonly associated with endogenous depression were significantly related with poor response to ECT.

J. Mendels (1965c) further analysed his data of the 50 depressed patients to find a method for prognosis. For this purpose, he investigated 21 clinical factors which were in some way associated with response to ECT, either individually (Mendels 1965a) or grouped according to the scoring method of Hobson (Mendels 1965a) or as a part of definition of endogenous and reactive depressions (Mendels 1965b). Improved patients were those who had improved by 50% or more at 3 months follow-up and unimproved patients were those who had improved by less than 50%.

With the help of computer, they developed weightage for the clinical feature to indicate the patient's prognosis. In the developed scale, total score of 5.8762 meant a good response. But, there was 20% error in prediction. Precipitating factor was not selected by computer. It was given a weight of 0.6000 (on the basis of Mendels 1965a). Then, the prognostic efficiency became 90%.

McConaghy et. al. (1968) carried on double blind control trial comparing the effect of Amitryptyline and Protriptyline.
on patients suffering from depressive states. 100 out-patients were studied; these were followed-up to one month only and were rated as Markedly Improved, Moderately Improved, and Slight or No Improvement. With Amitriptyline, 5% level of significance was reached in three factors - absence of retardation, absence of hypochondriasis and absence of self-pity; While with Protriptyline, four factors indicated good prognosis - previous attack of depression, duration not more than 3 months, good previous psychological adjustment and history of other psychiatric illness in blood relatives.

McConaghy (1968) maintained that in their study, 34 relationships were tested for each drug so that there is a reasonable possibility that three or four relationships found to be significant at 5% level could have occurred by chance. This possibility could only be regarded as unlikely if the clinical features found to be significant had been reported in other studies as being related to response to treatment.

J. Mendels (1968) further carried on analysis of 14 symptoms in 100 depressed patients and demonstrated that presence of reactive symptoms divided the patients into two groups better than the presence of endogenous items. Individual correlation of symptoms showed that reactive items were more closely related with response to EOT. A score based on the presence of four reactive items correlated more closely with response to EOT than did a score based on presence of 4 endogenous items. These four reactive items, which are closely related to response to ECT, are - neurotic trait in childhood, precipitating factor, inadequate personality and emotional liability.
Kay et al. (1969a) studied 104 depressed patients who were followed-up 5-7 years later (Kay et al. 1969b). Five measures of improvement were used. (1) Immediate outcome; (2) Hamilton Rating Scale; (3) Number of Readmissions; (4) Prolonged ill-health and (5) A Favourable Course. When individual relationship between the 35 features and outcome was examined by correlations and regression, two symptoms - Objective Retardation and Somatic Complaints were found to be consistently important; the first favourable and the second unfavourable. The prediction given by these two were in general better than those obtained by endogenous and neurotic syndrome respectively.

Kerr et al. (1972) carried on a prospective study of the course and outcome of illness of 126 patients admitted to hospital with affective disorders. Each patient was interviewed during the illness and at follow-up, the mean duration of follow-up period being 3.8 years. Two aspects of prognosis were studied. First, the outcome of the group was examined by means of a longitudinal measure of outcome which reflected the average level of adjustment through the follow-up period. Secondly, items of predictive importance were isolated and their predictive value was determined by multiple regression analysis.

Constitutional factors were found to be important, premorbid stability of personality being related to good outcome. The presence during the illness of features generally associated with depression was related to good prognosis whereas those associated with anxiety were related to poor prognosis. They developed predictive scale for affective disorder consisting of eleven weighted items. According to Kerr et al. (1972), the validity of
Kerr et al. (1974) followed up 66 anxiety state and 45 depressive patients over a period of 3.8 years. The clinical features during illness which were associated with subsequent outcome were determined. It was found that the presence of physical illness and duration of illness were good predictive of outcome. But if physical illness is disabling and progressive, the outcome of the depressive illness is likely to be poor. In constitutional factors, hysterical personality trait, low extraversion and high neuroticism score were found to be associated with poor outcome. Of illness, features loss of weight and early waking were related to good outcome; diurnal variation of mood and retardation were found to be of no predictive value.

The association between panic attack - depersonalization, temporal features and poor outcome suggest that symptoms of anxiety in setting of depressive illness are of adverse significance. Kerr et al. (1972) also reported that: hypochondriacal complaints are prognostically unfavourable. There is a relationship between loss of confidence and good outcome. In this study, Kerr et al. found a regression score of twelve features predicting outcome in depressive illness.

Barron (1953a) studied 33 Psychoneurotics to find out the test correlates of response to psychotherapy. The patients were divided in Improved and Unimproved Group, on the basis of rating made by experts. He found that certain items of MMPI were positively correlated with improvement and he developed a Scale for predicting response to psychotherapy from these items (Barron 1953b). But improved and
unimproved group did not differ significantly on any Rorschach determinants, nor in any important ratios such as : W, D, Dd, S, M;Sum C and so on. Even Harris Christiansen Prognostic Index correlated 0.00 with Improvement.

Barron (1953a), on the basis of his study on the test correlates of psychotherapy (1953a), developed a scale which consisted of 68 items from MMPI. These items were selected from 550 items of MMPI on the basis of significant correlation with rated improvement in 33 psychoneurotic patients who were treated for 6 months. The mean of improved group on those items was significantly higher (at 0.01 level) than mean of unimproved group. And he maintained that consideration of its content suggests that a broader psychological interpretation can be placed upon it making it useful as an assessment device in any situation where some estimate of adaptability and personal resourcefulness is wanted. It appears to measure the various aspects of effective personal functioning which are usually subsumed under the term Ego-strength.

R. Taft (1957) confirmed the validity of the scales on the basis of the finding that the score on the scale can distinguish normals from patients.

Tamkin A.S. (1957a) also confirmed the construct-validity of the scale.

When Tamkin et. al. (1957b) tried to replicate their findings on a larger population, high correlation was found in Ego-Strength Score, Critical Item score and F Score. They maintained that additional corroboration of the previous study is suggestive of construct validity of the scale; but confirmation of inability
of differential diagnostic group (presumably of differential level of Ego-strength) still suggests caution in application of Ego-Strength scale to hospitalized psychiatric population.

Gottesman (1959) also reported that Ego-Strength Scale discriminated between psychiatric and non-psychiatric population, but it did not differentiate different degree of psychiatric incapacitation.

Korman (1960), on the basis of his study, concluded that although Ego-strength Scale was empirically derived, this empirical construct, which Ego-strength-scale measures, is related to Ego-strength as defined by Dollar and Miller (1950) - which is a higher mental process. It includes ability to appropriately mediate discrimination, generalization etc. In his study, high-ego-strength-group was able to resolve a discrimination conflict more speedily than low-ego-strength-group.

Kleinmuntz (1960) proved the validity of the test on the basis of his findings that the score on the test can differentiate between adjusted and maladjusted students at 0.001 level.

Silverman (1963) investigated whether Barron's Ego-Strength-Scale by itself could demonstrate similar reliability and validity - as when administered in the context of full MMPI. 32 hospitalized normals and 32 chronic schizophrenics were administered the full MMPI and, one week later, an individual form of Ego-Strength-Scale. There was very high correlation between Ego-Strength-Scores on test-retest within each group. The construct validity of Ego-Strength Scale was supported on both forms.

Not many studies are, however, available on the topic of Relationship of Ego-Strength Scale and its Capacity to give the.
prognosis of illness. If it measures the ego-strength, it should be positively related with the prognosis of the illness.