A 7 months controlled prospective study on the pattern of postpartum mental illness in three Nairobi hospitals, Kenya.

by

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D E C L A R A T I O N

I, REHABIAM MAHENGE, DO HEREBY DECLARE THAT THIS DISSERTATION IS MY ORIGINAL WORK AND HAS NOT BEEN PRESENTED FOR A DEGREE IN ANY OTHER UNIVERSITY

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THIS DISSERTATION HAS BEEN SUBMITTED FOR EXAMINATION WITH MY APPROVAL AS A UNIVERSITY SUPERVISOR

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SUMMARY

During the period 1st March to 30th September, 1986, a controlled prospective study on postpartum mental illness was done in three hospitals in Nairobi - Kenyatta National Hospital, Pumwani Maternity Hospital and Mathari Psychiatric Hospital.

By using simple selection criteria based on the symptomatology of major and minor psychiatric disorders (as detailed in the study protocol) and the operational definition, 65 index cases were included in the study. 65 normal puerperals (but only 59 records were available for analysis) matched for the place and period of delivery (within one month) were included in the study as a control group by random selection from Kenyatta National Hospital and Pumwani Maternity Hospital.

The findings showed that all forms of postpartum mental illness reported elsewhere were encountered in the study. Manic depressive psychosis (33.8%) was the most predominant form of postpartum psychosis, followed by transient organic psychosis (24.6%) and schizophrenia (18.5%) in that order. Neurotic depression was the most predominant form of postpartum neurotic disorder (18.5%). Anxiety state and hysteria formed 3% and 1.6% of the total index cases respectively.

The peak incidence of postpartum mental illness was in the first two weeks after delivery and the average stay in hospital was 4 weeks.

It was found that symptoms of organic cerebral dysfunction occured in half of the patients with psychoses and over one third of all the patients experienced maternity blues.

Physical, hereditary and psychological factors were found to play an important aetiological role in the psychoses. The role of these factors in neurotic depression was also important but the importance of hereditary factors was doubtful.

Primiparity was predominant in the index cases and together with delivery at home, instrumental and operative delivery, seem to be risk predictors for the development of postpartum mental illness.

It was found that the premorbid personality of patients was not different from normal puerperals. There was no association of postpartum mental illness with age, duration of labour, socioeconomic status, use or non-use of antenatal services.

The author believes that the factors found to be positively associated with postpartum mental illness can be used as risk predictors. Women at risk can therefore be identified for preventive measures. The midwives and nurses in maternity units, hospitals and maternal child health clinics are the primary health care workers available for preventive measures for postpartum mental illness which includes early identification and prompt treatment.

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I N T R O D U C T I O N

In studies of psychiatric disorders following childbirth the puerperium is taken to be 6 weeks after delivery (British schools) with an extension to 2 months (60 days) by De Lee (1929) for North American obstetricians. The maximum postpartum period accepted in forensic medicine is twelve months after childbirth, but in the present study postpartum mental illness is defined as one developing within 60 days of childbirth.

Psychiatric morbidity in the puerperium is much higher than at other times (Pugh et al, 1963); there is now ample evidence that there is an increased morbidity in the puerperium and this increased morbidity is mainly for affective illness (Brockington et al, 1981 and Kendell et al, 1981).

Statistical data of the frequency of psychoses following childbirth vary. Clouston (1904) found 5% of the female admissions to mental hospitals, while Kraepelin's (19th C) figure was 7% and Zilboorg (1929) gave 8.7%.

There have been studies done on postpartum mental illness; some prospective (e.g. Tetlow, 1955; Foundeur et al, (1957); Seager, (1960); Pugh et al 1963), others retrospective (e.g. Madden et al, 1958; Colin Protheroe 1969, Dasilva and Johnstone 1981, Meltzer and Kumar 1985) and a mixture of both prospective and retrospective study (e.g. Betty Jacobs, 1942) on postpartum psychoses. Most of these were aimed at establishing that postpartum psychosis is a distinct syndrome and a diagnosis separate from other psychiatric illness should be made.

Most authors now have views contrary to this. Although specific thought patterns, apparent psychodynamic conflicts and objects of anxiety usually centering around the new baby may be different in puerperal and non-puerperal psychosis, patients with postpartum psychosis demonstrate largely the same phenomenologic or descriptive signs and symptoms as patients with acute non-puerperal psychosis (Herzog and Detre, 1976; Karacan and Williams, 1970). Swift (1972) has also argued that the factors most frequently cited in the aetiology of postpartum psychosis are the same factors normally cited to explain most psychiatric illnesses.

As a result of the above consensus the condition "Peurperal Psychosis" has been removed from the ninth revision of the International classification of disease (ICD- 9), W.H.O. (1978).

The reasons presented by the authors and clinicians who continue to consider postpartum psychoses as distinct psychopathologic entities include:

(1) The lag or latent period i.e. onset rarely before the third day postpartum, suggesting a relationship to the precipitous oestrogen and progesterone reduction during this period.

(2) Onset of symptoms usually being preceded by a specific pattern of clinical signs including depressed and/or labile affect and irritability.

(3) Reports of associated reproductive pathology (Menstrual irregularities and premenstrual symptoms).

(4) Reports of associated thyroid dysfunction.

(5) Organic colouring in a significant number of cases (Confusion, disorientation and delirium).

(6) Specific psychological conflicts associated with pregnancy, childbirth and mothering in women with such psychoses, with reports of successfully using psychoanalytic theory-based techniques of treatment.

More recently, studies on less severe forms of postpartum mental illness have been done (e.g. Cox et al,1982; Pitt,1968). These studies have shown that a significant number of women appear to experience psychological distress of substantial degree following childbirth.

Such syndromes include a variety of neurotic patterns, psychosomatic disorders, and most commonly postpartum depression. Most studies on potpartum depression have been prospective (e.g. Dalton,1971; Pitt, 1968; Cox et al, 1982). Pitt in 1975 reviewing his experience in postnatal clinics offered an opinion that the present estimates of postpartum depression reflected only the worst cases and that as many as one third of postpartum women experience anxiety or depression for a month or more of the puerperium.

Studies in postpartum depression have aimed at establishing the incidence as well as possible associated aetiological factors.

Although definite aetiological causes have not been found for both postpartum psychoses and the less severe postpartum mental illnesses, the illness in the postpartum period remains peculiar and challenging.

The several fold increase in psychiatric morbidity during the postpartum period compared to during pregnancy (Paffenbarger, 1964), the changing pattern over the years (in different countries) of postpartum mental illness warrants further research, especially in the developing countries where little has been done in this particular field.

The present study is a 7 month prospective study (From 1st March to 30th September, 1986) on postpartum mental illness among Kenyans as seen in three Nairobi hospitals.

CHAPTER I

LITERATURE REVIEW

Postpartum mental illness has been described for centuries. Postpartum psychoses were recorded by Celsus (20BC - 30AD) and Galen (120 - 200 AD). Hippocrates in the 4th century BC described puerperal psychoses and speculated that they were caused by milk diverted from the breast to the brain. Marce in 1858 concluded that there was no form of insanity which could not occur in relation to the puerperium.

Over the years the incidence of delirious reactions has been observed in the West and been found to be falling. In more recent papers from the Western countries, the main categories of postpartum mental illness described are manic depressive psychosis, schizophrenic psychosis and neurotic reactions (Seager, 1960). While the incidence of delirious reactions has been found to be falling in the West there has been a rise in neurotic illness probably due to increased awareness and recognition rather than a real rise in incidence. Thus Strecker and Ebaugh found 2% in their series (1926) Boyd, found 6% (1942); Hempil 6% (1952) and Madden et al, 20.7% (1958).

While the incidence of delirious reactions has been found to be falling in the West, two studies in Africa (J.C. Ebie in Ibadan, Nigeria 1972, and C.R. Swift in Dar es Salaam, Tanzania 1972) found that organic psychoses in the form of confusional states are still common and come next to schizophrenic psychoses and are followed by manic depressive psychoses and neurotic reactions take last place.

The usual form of postpartum mental illness follows in general terms the pattern of non-puerperal mental illness but there have been some characteristics peculiar to postpartum mental illness. Armstrong-Jones (1923) mentioned a high incidence of infanticidal impulses. Brew and Seidenberg (1950) describe rejection of the child as universal.

Hemphil (1952) has described puerperal depression differing from manic depressive psychosis and resembling melancholia. Much more recently there have been many studies on puerperal depression. Tod (1964) found an incidence of 2.9%, Brice Pitt (1968) in a London Hospital survey found an incidence of 10.8%. Katharina Dalton (1971) and Paykel et al (1980) found an incidence of 7% and 20% respectively. Cox et al (1982) found that postnatal depression was 13% of their representative sample of 105 women.

Many workers have pointed to the occurence of postpartum mental illness in the first four weeks (Tetlow, 1955; Protheroe, 1969; Brockington et al, (1981); Ebie, 1972; Swift, 1972; Lawson and Stewart, 1970). Brice Pitt, (1968) points out that neurotic depression occurs a little later and lasts longer than psychosis. Meltzer and Kumar (1985) point out to the wider spread of time of onset of depressive illness but point out the growing consesus that in order to be qualified as postpartum a psychosis should have begun two or at most four weeks after childbirth.

Some retrospective studies have shown hospital stays of about one month of postpartum mental illness patients, for example

Ebie (1972) found more than 50% of his series discharged within 3 weeks and Swift (1972) had 90% of his series discharged within two weeks.

Organic colouring has been noted in the early stages of the puerperal functional psychoses. Thus Strecker and Ebaugh,(1926);Karnosh and Hope,(1937); B. Jacobs,(1942); and Protheroe, (1969) in their long retrospective studies all found significant proportions of their cases with organicity.

SOME FACTORS ASSOCIATED WITH POSTPARTUM PSYCHIATRIC ILLNESS

Workers over the years have investigated factors thought to be associated with postpartum mental illness. The factors have included physical, endocrine, socioeconomic, psychological, hereditary, predisposing personality factors and several other demographic factors.

Physical Factors

Many workers have investigated physical factors in association with postpartum mental illness. Strecker and Ebaugh (1926) found 34% of their series to be due to toxic factors, Solomons (1931) considered toxaemia of pregnancy, sepsis and chorea the most usual factors associated with postpartum mental illness. Picker (1938) reviewing the literature concerning cases associated with childbirth found 35% of 891 cases to be due to toxic exhaustion.

Crnickshank, (1940); Boyd, (1942); and Jacobs, (1942) found between 28% and

50% of their cases to be associated with toxic exhaustion and Skottowe (1942) mentioned physical complications in more than half of his cases. From 1948 to 1958 the pattern seemed to change. Brew and Seidenberg,(1950); Hemphil, (1952); Vislie,(1956); Madden et al,(1958), variously found very low rates of physical complications, and Tetlow (1955) found no difference in obstetric complications between patients with postpartum mental illness and normal cases.

However in recent studies in Africa, physical factors have been found to be important; thus Ebie (1972) in Ibadan found that high proportion (60%) of postpartum mental illnesses were accompanied by a febrile illness. 40% by some other physical disease and 41% had not had any antenatal care.

Swift (1972) in a retrospective study in Dar es Salaam found that 50% of the women studied had significant stress factors (other than pregnancy, delivery or history of mental illness) with physical factors outnumbering social or psychological factors. Protheroe (1969) found 28% of his cases had physical complications of pregnancy and these physical complications were outstanding in patients with organic psychosis. However studies on postpartum depression have not shown any association with obstetric compications (Pitt, 1968; Cox et al, 1982).

It has been suggested that postpartum mental illness (like the onset of labour) occurs as a result of endocrine changes, but few studies have been done to substantiate this.

However Karnosh and Hope (1937) found that values of prolactin and oestrogen estimates did not differ appreciably from those of non-puerperal psychotic women.

Bower and Altchute (1956) treated relapsing cases of postpartum psychotic depression with progesterone because they considered the relapse to be due to hyperfunction of the adrenal cortex. Delay et al (1948) considered the primary disorder to be in the hypophysiodiancephalic regions producing both puerperal psychosis and histological changes in the endometrium, but his hypothesis could not be confirmed so that no conclusions about endocrinological aetiological role have been made.

Cox et al,(1982) in their prospective study of Psychiatric disorders of childbirth noted that psychiatric symptoms were maximal in the first ten days after delivery when the fall in oestrogen and progesterone is maximal. Because of their failure to find any association of postpartum depression with social factors, marital status, or obstetric complications, they concluded that this association provided indirect support for the endocrine hypothesis that endocrines are the triggers of postpartum depression. However they concede that the relationship with psychological factors which sustain the depression is complex.

Social and Economic Factors.

Karnosh and Hope (1937) found an increased incidence of puerperal psychosis during the American depression but Brew and Seidenberg (1950) found a drop during the war years. Vislie (1956) on the

other hand found an increase in Norway of puerperal mental illness especially the neurotic type during the war years.

Tetlow (1955) found that a high proportion of single women (10%) and a further 5% had children out of extramarital conception among his cases of puerperal psychosis. However Protheroe (1969) points out that current authors find rates of postpartum mental illness inspite of high illegitimacy rate. Seager (1960) believes social factors play an important part in the illness though they may be responsible for the form of the illness and the content rather than the production of the illness. Swift (1972) found in his series 13% had social stresses like disturbed family situation.

Pitt (1968) noted that postpartum depression was not related to social factors but Paykel et al (1980) found that social stress played an important part in puerperal depression.

Psychological Stress Factors

Jacobs (1942) noted the importance of psychological conflicts as precipitating factors, and Skottowe (1942) commented on the frequency of "mental strain" present in 80% of his series of postpartum mental illness. White et al (1957) emphasised such factors as unstable marriage relationships and financial strain as a result of pregnancy in production of the illness. Fear of pregnancy, erroneous ideas about childbirth due to lack of knowledge, memories of previous illness

can affect even normal pregnancy (Tylden, 1950). Jacobs (1942) stressed the importance of psychological factors arising from environmental influences, conflict about childbirth, aversion towards childbirth in general, negative attitude towards motherhood and unsatisfactory marital life.

Cox et al (1982) found in their series that women whose mothers were dead were more likely to experience psychiatric symptoms immediately after childbirth suggesting heightened identification with their dead mothers during childbirth. Pitt (1968) however found that postpartum depression was unrelated to any obvious psychological stress.

Seager (1960) concludes from his study that the development of postpartum mental illness does not depend so much on the psychologically stressful factors, but rather on the hereditary and personality factors. Protheroe (1969) found no evidence of any specific psychological stress precipitating puerperal psychosis.

Hereditary Factors

Hereditary factors are not easy to assess due to secretiveness about history of mental illness, therefore great variability of results has been reported by different workers. Thus in their studies of puerperal psychosis Cruickshank, 1940) found 32%, Skottowe (1942) 50%. Tetlow (1955) 25%, and Martin (1958) 32%, to be positive for hereditary factors. However in studies of puerperal depression Pitt (1968) found hereditary predisposition while Jansson (1964) and Tod (1964) did not find hereditary factors to be of aetiological importance.

Premorbid Personality

Opinions about the significance of predisposing personality are conflicting, some believe it is significant but others take the opposite view. Zilboorg (1929) suggested postpartum schizophrenia develops in a sexually frigid schizoid personality, Boyd (1942) mentions immaturity and anxiety concerning childbirth. Hemphil (1952) describes a dependant overanxious obsessional rigid personality leading to puerperal depression. Tetlow (1955) found sexual and reproductive inadequacy as predisposing personality but the evidence is not well presented. White et al (1957) found evidence of longstanding maladjustment and immaturity but could not confirm this with a repeat study. Anderson (1933) in a controlled study found no material differences in the pre-psychotic sexual life of groups of puerperal and non-puerperal psychotic women. In a longterm retrospective study on puerperal psychosis, Protheroe (1969) concluded that puerperal psychosis had no specific hereditary predisposition and that there was no specific personality predisposition for puerperal psychosis.

Other Demographic Factors

Many workers have looked at age and parity of women developing postpartum mental illness. Many agree that age of the woman makes no difference to her liability to develop mental illness after childbirth. Primiparity has been found to predominate among women developing postpartum mental illness; thus Swift, (1972); Ebie,(1972),

Seager (1960) and Tetlow (1955) respectively found 25%, 31%, 38% and 46% to be primiparous among their cases. Higher figures have been found by other workers (e.g. Protheroe 1969, 60%; Meltzer and Kumar 1985, 63%). Similarly Kendell et al,(1981) and Paffenbarger (1964) found a high association between primiparity and psychiatric admission postpartum.

CHAPTER II

(a) AIMS AND OBJECTIVES

The following were the aims of the study:-

(1) To find out the pattern of postpartum mental illness in terms of the different forms or diagnostic categories that are encountered and the common characteristics normally accompanying the illness.

(2) To find out the factors associated with postpartum mental illness which could be of aetiological importance.

The factors to be investigated were:-

(i) Physical factors

(ii) Socio-economic factors

(iii) Hereditary factors

(iv) Psychological stress factors

(v) Predisposing personality factors

(vi) Some demographic factors

(3) To identify services which can be utilised to prevent or at least control postpartum mental illness in the light of the findings.

The study is meant to serve as a baseline study in the field of postpartum psychiatric disorders in the Kenyan setting, as this will be the first study of its kind.

MOTIVATION OF THE STUDY

The study was chosen because postpartum mental illness is an important subject which has been given little attention in our local setting.

To the best of the author's knowledge no studies on postpartum mental illness in Kenya have been done. Equally unfortunately only a few studies have been done in Africa for example, Swift in Tanzania, (1972) and Ebie in Ibadan, Nigeria (1972), both retrospective studies.

Postpartum mental illness is an important subject because the effects of the illness following childbirth involves the entire family and may be responsible for its total disruption.

Severe postpartum mental illness may be responsible for non accidental injury to the child by the mother or actual infanticide itself (Dasilva and Johnstone 1981).

It has been shown that children of depressed mothers in the postpartum period may show behaviour disturbance at three years (Wrate et al, 1985) or cognitive defects at 4 years (Cogill, 1986). These findings suggest postpartum depression may have a long term negative impact on the family, adding to the importance of postpartum mental illness as an area for research.

(b) THE SOURCE OF THE SAMPLE AND ITS LIMITATIONS

The three hospitals from which the index cases were obtained i.e. Kenyatta National Hospital, Pumwani Maternity Hospital and Mathari Psychiatric Hospital are public institutions with peculiarities which may influence the results. All of them are in the national capital and therefore likely to attract clients in one way or another from all over the country and may therefore at least

exaggerate the incidence of the disorders under study.

Kenyatta National Hospital and Mathari Psyhiatric Hospital are National teaching hospitals: they are in a stronger position to influence the results.

Pumwani Maternity Hospital has the whole city as its catchment area for obstetric patients (total population over 3/4 of a million). It caters for patients detected to have any obstetric complications from its peripheral clinics. It is a 344 bed hospital and handles 25,000 deliveries per year.

Kenyatta National hospital is a 1,300 bed general hospital with 108 beds for obstetric cases and 97 beds for gynaecological cases. It carries out about 6,000 deliveries per year. The policy of the hospital is to attend to high risk or difficult deliveries referred from various institutions around Nairobi and from up-country, but there is a substantial number of self referrals with normal deliveries who cannot be turned away as they come in active labour.

Mathari Psychiatric hospital is the only National mental hospital attracting patients from Nairobi and all over the country. It attracts patients with severe psychoses who cannot be tolerated in the community and a small number is referred from other hospitals. It has 1176 beds with 4,000 + admissions per year.

All the hospitals above cater for a non-representative population comprising of the less privileged socioeconomically. The employed

(with health insurance) and the wealthy do not come to these hospitals as they are treated in private hospitals and clinics in the city. Therefore the sample missed all these patients treated in private institutions.

Patients delivering in Kenyatta National Hospital and Pumwani Maternity Hospital who developed illness after discharge from hospital but did not come back to one of the three hospitals were missed. The policy of discharge from the two hospitals within 48 hours of apparently normal deliveries also contribred to the non-detection of some cases.

Illnesses with quick resolution before admission was sought, were not available for study.

Minor psychiatric disorders after chilbirth not requiring admission or treatment were also missed from the study.

Although a lot of cooperation on when to discharge patients from the two hospitals (Kenyatta National Hospital and Pumwani Maternity Hospital) was enjoyed, the policy of discharge for non psychiatric conditions for these hospitals still influenced the period of stay in hospital for the puerperal mental illness, and in severe mental illnesses transfer to Mathari Psychiatric Hospital with relevant legal documents was not easily arranged and necessitated the discharge of the patient for treatment as an outpatient in the absence of the author.

The discharges and paroles at Mathari Psychiatric Hospital were dependent both on improvement on the patients illness and the hospital routines and manpower availability which did not always coincide with the satisfactory resolution of the illness.

(C) METHODOLOGY

CONSENT

Consent to do the study was obtained from the Research and Ethics Committee, Kenyatta National Hospital, Nairobi. Informed consent was obtained from each patient or relatives.

DEFINITION

For the purpose of the study postpartum mental illness was defined as any mental illness which develops within sixty (60) days after child-birth. Sixty days is accepted by American and British Psychiatrists as the maximum duration of the puerperium.

SELECTION OF CASES

All cases satisfying the operational definition coming to Mathari Psychiatric Hospital were included in the study.

Patients to be included in the study from Kenyataa National Hospital postnatal and gynaecological wards and Pumwani Maternity Hospital postnatal wards were selected using the following criteria (provided they satisfied the operational definition):

(i) Patients whom attending doctors, midwives and nurses thought were mentally ill.

(ii) Patients showing abnormal behaviour.

(iii) Patients neglecting their babies and or themselves.

(iv) Patients who were socially withdrawn.

(v) Patients who were very slow in acting, talking and thinking.

(vi) Patients who were depressed and/or tearful.

(vii) Patients who were agressive and/or violent.

(viii) Patients who were excessively preoccupied with themselves.

(ix) Patients who were anxious and frightened.

(x) Patients who had hallucinations delusions or illusions.

(xi) Patients who were confused (having clouded consciousness)

(xii) Patients who had multiple physical or psychological complaints.

These patients were then given a standardised psychiatric interview (see appendix) followed by a physical and mental state examination. A diagno based on the 9th International Classification of Diseases (ICD 9) was made. The diagnosis made before discharge from the hospital was the final diagnosis for the purpose of this study.

Patients who had minor psychiatric symptoms were included in the study if their symptoms persisted for more than two weeks after delivery, that is their inclusion was confirmed in the follow up clinic if they had been discharged before two weeks had elapsed. This was to exclude patients with maternity blues only.

A control group of normal puerperals matched for period of delivery (within one month) and place of delivery (whenever possible) was selected by a random method using the delivery registers in Pumwani

Hospital and Kenyatta National Hospital (including controls for patients in Mathari Psychiatric Hospital who had delivered elsewhere)

For each patient and control, a haemogram, stool examination, and urinalysis were done.

A total of 65 index cases and 65 controls (but only 59 records were available for analysis) were included in the study.

The patients who stayed in the ward for less than two weeks were followed up in postnatal clinics a month later.

The normal puerperals were asked to report back to the author if they developed any problems (physical or mental) otherwise they were not followed up in the postnatal clinic.

The results were analysed partly manually and partly by using the MICROSTAT package computer.

CHAPTER III

R E S U L T S

The forms of postpartum mental illness (diagnostic categories)

The following ICD 9 diagnoses were made for the index cases; since the ICD 9 does not have postpartum mental illness (see introduction) as a unitary entity, the identifying secondary diagnosis - mental disorder complicating pregnancy, childbirth and the puerperum ICD 9 Code 648.4 was used with the primary diagnosis.

1. Affective Psychoses (Manic-Depressive Psychosis)

   (296 + 648.4): To arrive at this diagnosis, there had to be a primary disturbance of mood (elation, depression or severe irritability) which was accompanied by one or more of the following: delusions, perplexity, disturbed attitude to self, disordered perception, disorder of behaviour all in keeping with the patients prevailing mood. It was not possible to separate psychotic depression which was not part of the manic-depressive psychosis due to the limitation of the study period

2. Schizophrenic Psychosis (295 + 648.4)

   To arrive at this diagnosis, the patient had to be in clear consciousness and normal intellectual capacity, had no evidence of organic cerebral disease or mental retardation and during the

same illness there was a disturbance in at least two of the following: thought, perception, affect (inappropriate or blunted), conduct or personality deterioration.

3. Transient Organic Psychosis (293 + 648.4)

To arrive at this diagnosis there had to be clouded consciousness and one or several of the following: confusion, disorientation, illusions and hallucinations. Reversibility of the above features was an important feature.

4. Neurotic Depression (300.4 + 648.4)

To arrive at this diagnosis there had to be a depressive mood, without delusions or halluciantions with or without irritability. The depression had to be labile with the environment..

5. Anxiety State: (300.0 + 648.4)

This was arrived at in two cases in whom there were manifestations of anxiety in physical and mental form not due to real danger.

6. Hysteria (300.1 + 648.4)

This diagnosis was reached at in one patient who had histrionic and demanding behaviour. She had atypical epileptic fits (functional fits), witnessed by the midwives. Her symptoms quickly disappeared when she was ignored while having "attacks" and encouraged to behave 'normaly'. She was functioning well without any symptoms in the

follow-up postnatal visit.

There were a total of 22 index cases diagnosed as manic depressive psychosis. They formed the commonest form of the illness, accounting for 33.8% of the index cases. For the purpose of this study only two subcategories of manic-depressive psychosis (manic type and depressed type) were used. All the cases had to be assigned to one of these depending on the dominating features. There were therefore 17 manic - depressive psychosis - manic type (ICD 296.0) cases and 5 manic - depressive psychosis - depressed type (ICD - 296.1) cases forming the affective psychoses group.

There were 16 index cases diagnosed as organic psychosis (transient organic psychosis). These formed 24.6% of the index cases and were the second commonest form of postpartum mental illness.

The next commonest form of postpartum psychosis was schizophrenia with 12 cases forming 18.5% of the total index cases.

A similar number, i.e. 12 cases (18.5%) were diagnosed as neurotic depression.

Two cases were diagnosed as anxiety states and one was diagnosed as hysteria. These together completed the list of forms of illness encountered and formed 4.6% of the index cases.

Figure I shows the distribution of the forms of postpartum mental illness in form of a histogram.

DEMOGRAPHIC AND OBSTETRIC FACTORS

Age

The mean age for the index group was 22.9 years and the control 23.9 years. The distribution in age groups was almost the same and analysis showed there was no statistically significant difference. 42% of both groups were in the 21 - 25 years age group and 34% in the 16 - 20 years age group. Only 9% were above the age of 30 years. Table I and Figure II shows this distribution.

Parity

The index and control were grouped into 5 groups according to the parity encountered in the study. Table 2 and figure III shows this distribution according to parity.

There was no statistically significant difference between the two groups in the distribution according to parity. 48% of the index group were primiparous, then there was a sudden decline but a near equal distribution from parity two upwards.

Place of Delivery

19 (29%) of the index group delivered at home. The majority of these were the patients who were psychotic and who had been admitted to Mathari Psychiatric hospital. A comparison with the control group was not done because the control group was a hospital delivered group, all from the postnatal ward. The index cases who had delivered at home

had come to Mathare Psychiatric Hospital or to Kenyatta National Hospital gynaecology wards. There were few cases in the control who had delivered at home and were then rushed to hospital soon after.

Type of Delivery

The index and control were compared in terms of the type of delivery they had undergone. Table 3 and figure VI show this distribution. 15 (23%) of the index group had undergone either an instrumental assisted delivery or a surgical operation (caesarean section) while only 4 (6%) of the control group had these types of delivery. A chi-square test showed that there was a significant difference between the two groups. There were significantly more index cases delivering by instrumental assistance or caesarean section in the index group, than in the control group.

Duration of Labour

The index and control group were compared in terms of duration of labour. Figure V shows the distribution of the two groups according to duration of labour. Only a small proportion of both groups had prolonged labour and there was no significant difference between the two groups in terms of duration of labour.

Antenatal Services

The index and controls were compared in the utilisation of antenatal services. Figure VII shows this distribution. There is only a small

proportion of the index and control group who did not use antenatal services. There was no significant difference between the two groups.

Traditional Medicine

There were only 2 cases in the index group who used traditional medicine during labour and none in the control group indicating a highly Westernised type of obstetric practice, at least in this sample of cases, who live in and around Nairobi.

FACTORS OF POSSIBLE AETIOLOGICAL SIGNIFICANCE ASSOCIATED WITH POSTPARTUM MENTAL ILLNESS

Factors of possible aetiological significance which were investigated included socioeconomic, physical, hereditary (i.e. family history of mental illness), psychological and predisposing personality factors.

(1) Socioeconomic Factors

(a) Marital Status

The majority of the index and control group were married as shown by table 4 and XIII. The distribution according to marital status did not show a significant difference between the index and control group ($P = 0.1879$).

(b) Income

Table 5 shows the distribution of the index and control group according to income level and figure XIV shows this distribution in the form of

histograms. There was no difference in the distribution between the index and control by statistical analysis. The majority of both groups were in the low income group and there were very few high income level group.

(c) Education

Table 6 and figure XV shows that the majority of both the index and control group had primary education but distribution between the two groups did not show statistically significant differences.

2. Physical Factors

The physical factors (physical complications) encountered in the study were anaemia, puerperal sepsis, pre-eclampsia and hypertension. Table II and figure XVI show the distribution of the index and control cases according to these factors. For each factor there were more cases in the index than the control group. There were a total of 29 index cases (44.6%) with physical complications as compared to 3 control cases (5%). This is a highly significant difference ($P = 0.00153$).

3. Hereditary Factors

The indicator for positive heredity used in the present study was a positive history of mental illness in first degree relatives (parents and siblings) or second degree relatives (cousins, aunts, nephews etc). For mental illness to have occured a relative had to have had psychiatric service contact (hospitalisation and/or treatment as an outpatient).

Table 12 shows the distribution of both index and control cases according to family history of mental illness. There were a total of 13 patients (20%) positive for hereditary factor (positive history of mental illness in the family) in the index group compared to 4 controls (6.8%). The difference is statistically significant ($P < 0.005$)

4. Psychological Stress Factors

Ten psychological stress factors commonly occuring in our local setting but chosen from factors previously mentioned by other authors (see literature review) were investigated by gathering information from the patient or relatives.

Table 13 shows the distribution of the index and control cases according to positive psychological stress factors. In all but two factors 8 and 10, there were more index cases positive for the factors than the controls. This excess of index cases in the different stress factors is as shown in table 13. The index and control cases were also grouped according to the number of stress factors as shown by table 13b. There were 14 (21.5%) index cases without a stress factor as compared to 27 (45.8%) of the control group. There were 51 (78.5%) index cases with one or more stress factors as compared to 32 (54.2%) of the control, which is a statistically significant difference ($P < 0.05$).

5. Predisposing Personality Factors

Five predisposing personality factors which have been studied before

(Seager 1960) were investigated. These factors are anxiety proneness, schizoid personality, extraversion, obsession and childhood neurotic traits. (See index for definitions).

Table 14 shows the distribution of the index and control cases according to these factors. There was no statistically significant difference in the distribution of the two groups as shown by chi-square tests for all the five factors.

The Individual Diagnostic Categories

(1) Manic Depressive Psychosis

There was a fairly high family history of mental illness (8 cases out of 22 cases which is 36%). There was a low incidence of physical complications in this diagnostic category. Psychological stress factors appeared in a significant number of cases in this group, one factor (i.e. unwanted pregnancy) occuring in 59% of the index group with this diagnosis. (see table 15).

(2) Organic Psychosis

Positive family history was very low in organic psychosis as one might expect. Only 2 cases of the 16 had a family history of mental illness. Physical complications occured frequently in this diagnostic group with pre-eclampsia occuring in 6 (38%) anaemia in 6 (38%) and puerperal sepsis in 4 (25%) of the 16 cases with this diagnosis (see table 16).

(3) Schizophrenic Psychosis

Patients with this diagnosis had high positive heredity. Six (50%) cases had positive family history for mental illness. Four cases had puerperal sepsis (33%). Psychological stress factors were occuring in a high proportion of this diagnostic group, some factors (i.e. premarital pregnancy, recent stressful event, unwanted pregnancy, unhappy marriage) were occuring in significant proportion of the cases up to 1/3 of the cases (see table 17).

Neurotic Depression

There was low heredity in this diagnostic group. Only 1 case had a positive history of mental illness in the family. Physical factors occured as follows: 3 cases with pre-eclampsia (25%) 4 (33%) with anaemia and 2 (9%) with puerperal sepsis. Psychological stress occured in a significant number of this group, many factors occuring in 1/3 of the cases in this category of 12 patients.

SOME OBSERVATIONS OF THE INDEX GROUP

Onset of Symptoms

The time of onset of symptoms of the index group was plotted. Table 7 shows the distribution according to onset of symptoms. Figure IX shows this distribution in form of a histogram. 69% of the index group developed symptoms within two weeks of childbirth and by the fourth week 86% of the index group had developed symptoms.

Table 8 shows the distribution of the index cases in the different diagnostic categories according to the time of onset of symptoms and figure X shows this combined distribution in form of a histogram.

Hospital Stay

The period of stay in hospital was plotted for the index group. Table 9 shows the distribution of the cases according to stay in hospital. Figure XI shows the distribution in the form of a histogram. More than half of the cases (54%) were discharged by three weeks. Table 10 shows the combined distribution of the index cases according to the period of stay in hospital and figure XII is the histogram for this distribution.

Organic Colouring (Symptoms of Organic Cerebral Dysfunction)

Among the functional psychoses (manic depressive psychosis and schizophrenia) there was organic colouring in the initial stages of the illness in 17 out of a total of 34, an incidence of 50%.

Maternity (Postnatal) Blues

Among the index group 25 cases had experienced severe postnatal blues, an incidence of 38.5% while the control group had only 7 with postnatal blues. Severe postnatal blues occured in 33% of neurotic depressives, 41% of manic depressives, 38% of organic psychotics and 42% of schizophrenics. There was therefore a high incidence of maternity blues in all the diagnostic categories.

TABLE I

Age Distribution

	Age group	Index	Control
1	15 yrs	1 (2)	0 (0)
2	16 - 20 yrs	22 (34)	17 (29)
3	21 - 25 yrs	27 (42)	25 (42)
4	26 - 30 yrs	9 (14)	8 (14)
5	31 - 35 yrs	6 (9)	4 (7)
6	35 yrs	0 (0)	5 (8)

Chi-square = 6.903 D.F. = 5 P = 0.2280 N.S.

Figures in brackets are percentages

N.S = Not significant

TABLE 2

Parity Distribution

Parity	Index	Control
1	31 (48)	21 (34)
2	7 (11)	11 (19)
3	10 (15)	7 (12)
4	6 (9)	9 (15)
5	11 (16)	12 (20)

Chi-square = 4.154 D.F. = 4 P = 0.3856 N.S.

Figures in brackets are percentages

N.S. = Not significant

TABLE 3

Distribution According to Type of Delivery

	Index	Control
S.V.D.	50 (77)	55 (93)
Assisted	6 (9)	2 (3)
Operation	9 (14)	2 (3)

Chi-square 6. 417 D.F = 2 P = 0.0404 S.

Figures in brackets are percentages

S. = Significant

TABLE 4

Distribution according to marital status

Status	Index	Control
Married	43 (66)	48 (81)
Single	19 (29)	10 (17)
Divorced	2 (3)	0 (0)
Widowed	1 (2)	1 (2)

Chi-square 4.789 D.F. = 3 P = 0.1879 N.S.

Figures in brackets are percentages

N.S. = Not significant

TABLE 5

Distribution According to Income

Status	Index	Control
Low income	43 (66)	30 (51)
Medium Income	21 (32)	28 (42)
High Income	1 (2)	1 (2)

Chi-square = 3.032 D.F. = 2 P = 0.2196 N.S.

Figures in brackets are percentages

N.S. = Not significant

TABLE 6

Distribution According to Education

Status	Index	Control
Illiterate	12 (18)	8 (14)
Primary	36 (55)	39 (66)
Secondary	17 (27)	12 (20)

Chi-square 1.495 D.F. = 2 P = 0.4735 N.S.

Figures in brackets are percentages

N.S. = Not significant

TABLE 7

Distribution According to Time of onset of Symptoms of Index Cases

Time	No. of Cases
1st Week	32
2nd Week	13
3rd Week	9
4th Week	2
5th Week or more	9

TABLE 8

Combined Distribution of the Index Cases in their Diagnostic Categories According to the Time of Onset of Symptoms

	Week 1	Week 2	Week 3	Week 4	Week 5 or more
Manic Depressive Psychosis	9	8	2	1	2
Schizophrenic Psychosis	3	2	4	0	3
Organic Psychosis	11	2	1	0	2
Neurotic Depression	8	11	2	0	1
Total	31(50)	13(21)	9(14.5)	1(1.6)	8(12.9)
Total (Psychoses Only)	23(46)	12(24)	7(14)	1(2)	7(14)

N.B. Figures in brackets are percentages.

Three cases - 2 anxiety states and 1 hysteria are not included in the table.

TABLE 9

Distribution According to time of Stay in Hospital for all categories

Time	No. of Cases
1 Week	12
2 Weeks	14
3 Weeks	9
4 Weeks	12
5 Weeks or more Weeks	18

TABLE 10

Combined Distribution of the Index cases in their Diagnostic Categories According to Period of stay in Hospital

	1 Week	2 Weeks	3 Weeks	4 Weeks	5 Weeks or more
Manic Depressive Psychosis	1	4	4	6	
Schizophrenic Psychosis	0	2	3	3	4
Organic Psychosis	3	7	2	2	2
Neurotic Depression	5	0	0	1	6
Total	9(14.5)	13(21)	9(14.5)	12(19.3)	19(30.6)
Total (Psychosis Only)	4(8)	13(26)	9(18)	11(22)	13(6)

N.B. Figures in brackets are percentages.

Three cases - 2 anxiety states and 1 hysteria are not included in this table.

TABLE 11

Distribution According to Associated Physical Factors

Factor	Index	Control
Anaemia	11(17)	1(2)
Puerperal Sepsis	14(22)	0
Pre-eclampsia	8(12)	1(2)
Hypertension	6(9)	1(2)
Total number with Physical Complications	29(44.6)	3(5)

Figures in brackets are percentages

TABLE 12

Distribution According to Family History of Mental Illness

	Index	Control
Paternal illness	4(4.6)	0
Maternal illness	6(9.2)	0
Sibling illness	6(9.2)	9
2^{o} relative illness	7(10.8)	4(6.8)
Total with family history	13(20)	4(6.8)

N.B. Figures in brackets are percentages

TABLE 13

Distribution According to Positive Stressful

Psychological Factors

	Factor	Index	Control	P	S/NS
1.	Unwanted pregnancy	26 (40)	11 (18.6)	0.02	S
2.	Premarital pregnancy	25 (38.5)	13 (22)	0.07	N S
3.	Aversive attitude to husband	17 (26.2)	3 (5)	0.003	S
4.	Recent stressful event	14 (21.2)	9 (15.3)	0.05	S
5.	Unprepared for Motherhood	12 (18.5%)	1 (1.7)	0.006	S
6.	Unhappy marriage	6 (9.2)	5 (8.5)	0.8	N S
7.	Neonatal death	5.(8.3)	1 (1.7)	0.2	N S
8.	No mother (died)	5 (7.7)	6 (10.2)	0.8	N S
9.	Aversive attitude to child	3 (4.6)	0	0.2	N S
10.	Still birth (present)	1 (1.5)	2 (3.4)	0.9	N S

Figures in brackets are percentages

S = Significant

N.S. = Not significant

P = Probability.

TABLE 13b

Distribution According to the number of Positive Psychological Stress Factors.

No. of stress factors	0	1	2	3	4
Index cases	14(21.5)	20(30.8)	14(21.5)	7(10.8)	10(15.4)
Control cases	27(45.8)	13(22)	10(16.9)	7(11.9)	2(3.4)

TABLE 14

Distribution According to Positive

Predisposing Personality Factors

Personality factors	Index	Control	P	S/NS
1. Anxiety prone	14 (21.5)	5 (8.5)	0.7	N.S
2. Schizoid	16 (24.6)	15 (25.4)	0.9	N.S
3. Extraverted	19 (29.2)	13 (23.5)	0.4	N.S
4. Obsessional	9 (13.8)	1 (1.7)	0.2	N.S.
5. Childhood Neurotic traits	13 (20)	10 (16.9)	0.8	N.S

N.S. = Not significant

Figures in brackets are percentages

P = Probability

N.S. = Chi-square not significant

TABLE NO. 15

Profile of patients with a Diagnosis of Manic Depressive Psychosis (N = 22)

	No	%
Family history of mental illness	8	36
Physical Factors		
Pre-eclampsia	3	14
Anaemia	2	9
Puerperal sepsis	2	9
Predisposing Personality Factors		
Schizoid	4	18
Anxiety prone	2	9
Obsessional	0	0
Extraverted	10	45
Childhood Neurotic Traits	5	23
Psychological Factors		
Unhappy marriage	2	9
Unwanted pregnancy	13	59
Premarital pregnancy	12	55
Recent stressful event	3	14
Mother died during patient's childhood	4	10
Unprepared for motherhood	4	18
Aversive attitude to child	1	5
Aversive attitude to husband	7	32

TABLE 16

Profile of Patients with a Diagnosis of Organic Psychosis (N = 16)

	No.	%
Hereditary Factors		
Family History of Mental Illness	2	13
Physical Factors		
Pre-eclampsia	6	38
Puerperal Sepsis	4	25
Anaemia	6	38
Predisposing Personality Factors		
Schizoid	2	13
Anxiety prone	5	31
Obsessional	2	13
Extraverted	4	26
Childhood Neurotic Traits	5	31
Psychological Factors		
Unhappy Marriage	3	19
Unwanted Pregnancy	6	38
Premarital Pregnancy	6	38
Previous Stillbirth	1	6
Previous Neonatal death	1	6
Recent Stressful event	2	13
Mother died during Patient's Childhood	1	6
Unprepared for Motherhood	3	19
Aversive Attitude to Child	2	13
Aversive Attitude to Husband	1	6

TABLE 17

Profile of Patients with a Diagnosis of Schizophrenia (N = 12)

Hereditary factors	No.	%
Family history of mental illness	6	50
Physical Factors		
Puerperal sepsis	4	33
Predisposing Personality Factors		
Schizoid	8	67
Anxiety prone	3	33
Obsessional	2	17
Extraverted	-	-
Childhood neurotic traits	4	33
Psychological Factors		
Unhappy marriage	2	17
Unwanted pregnancy	2	17
Premarital pregnancy	4	34
Recent stressful event	4	34
Mother died during patient's childhood	1	8
Unprepared for motherhood	1	8
Aversive attitude to child	1	8
Aversive attitude to husband	2	17

TABLE 18

Profile of patients with a Diagnosis of Neurotic Depression (N = 12)

Hereditary Factors	No.	%
Family history of mental illness	1	8
Physical Factors		
Pre-eclampsia	3	25
Puerperal sepsis	2	17
Anaemia	4	33
Predisposing Personality Factors		
Schizoid	5	42
Anxiety prone	3	25
Obsessional	1	8
Extraverted	1	8
Childhood neurotic traits	1	1
Psychological Factors		
Unhappy marriage	1	8
Unwanted pregnancy	4	33
Premarital pregnancy	4	33
Neonatal death	2	17
Recent stressful event	1	8
Mother died during the patient's childhood	1	8
Unprepared for motherhood	3	25
Aversive attitude to child	1	8
Aversive attitude to husband	1	8

FIGURE I

Distribution of forms of the illness in

in diagnostic categories.

(N = 65)

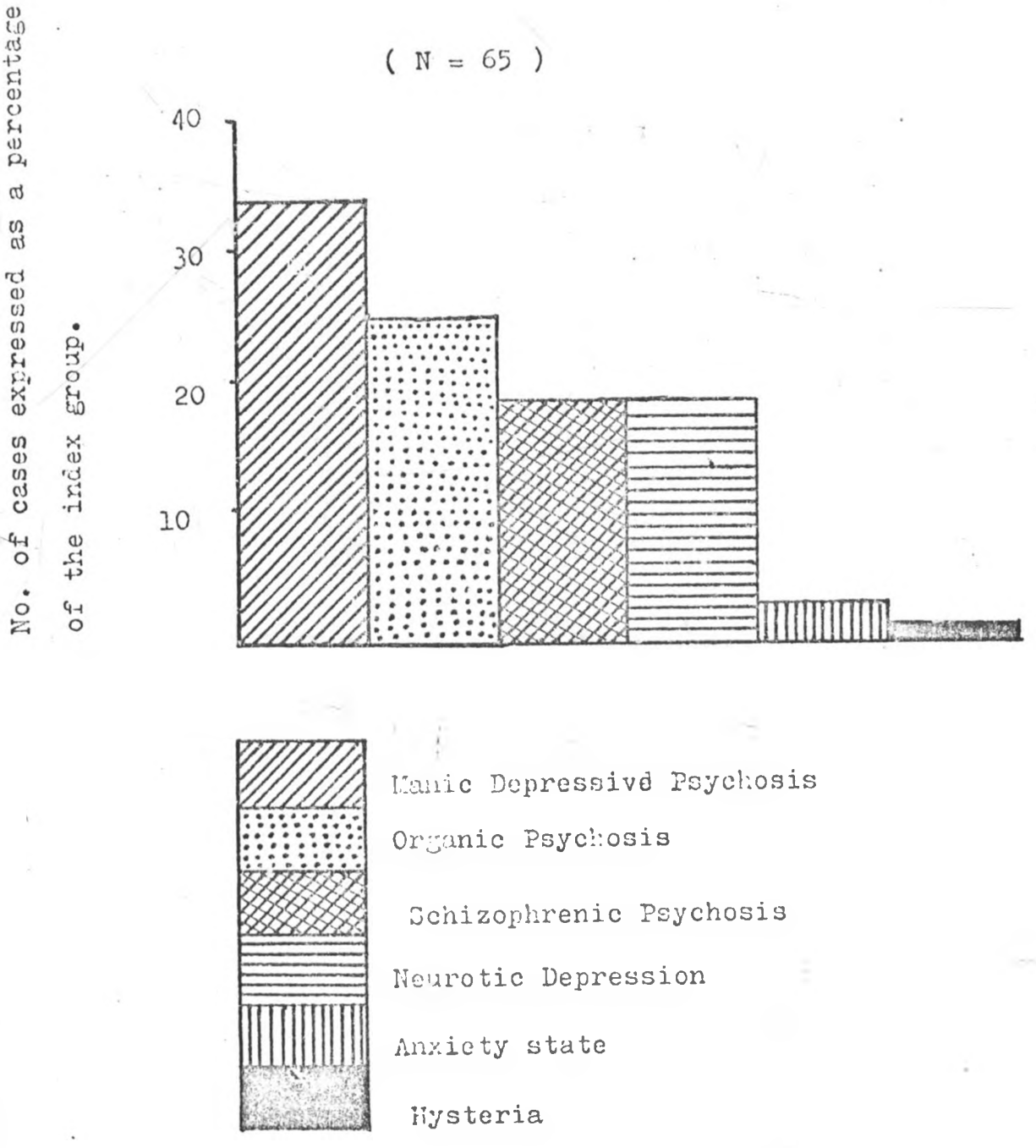


Figure II

The Age Distribution

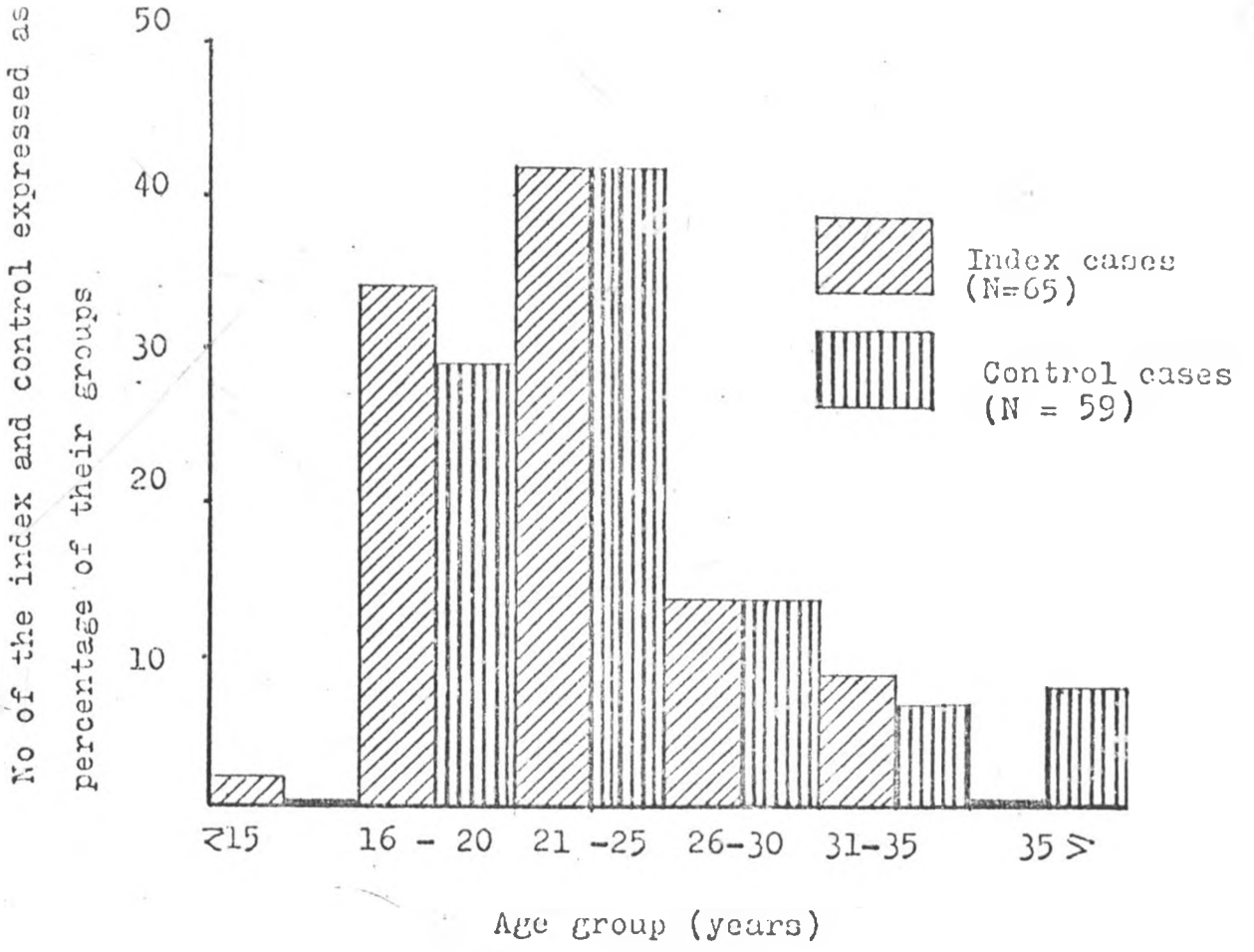


Figure III

Parity Distribution

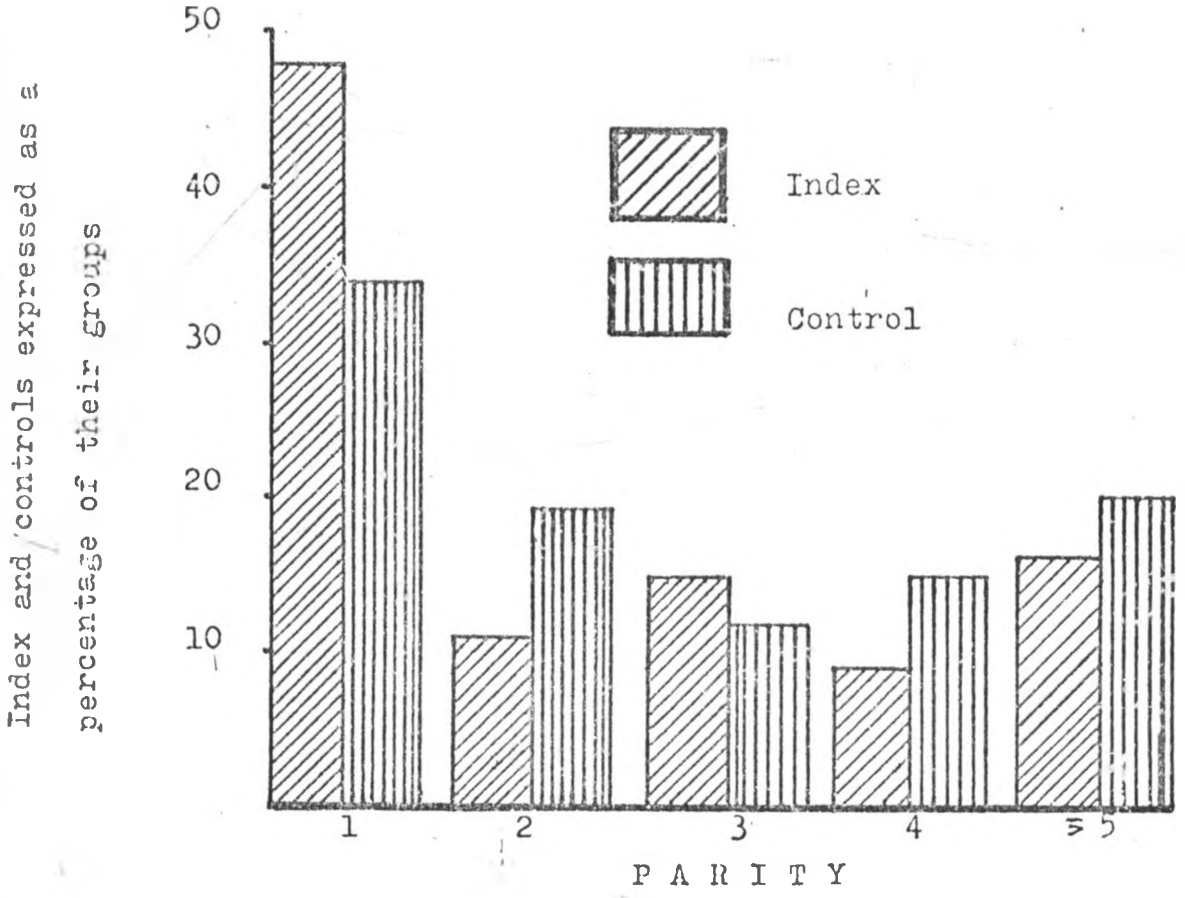
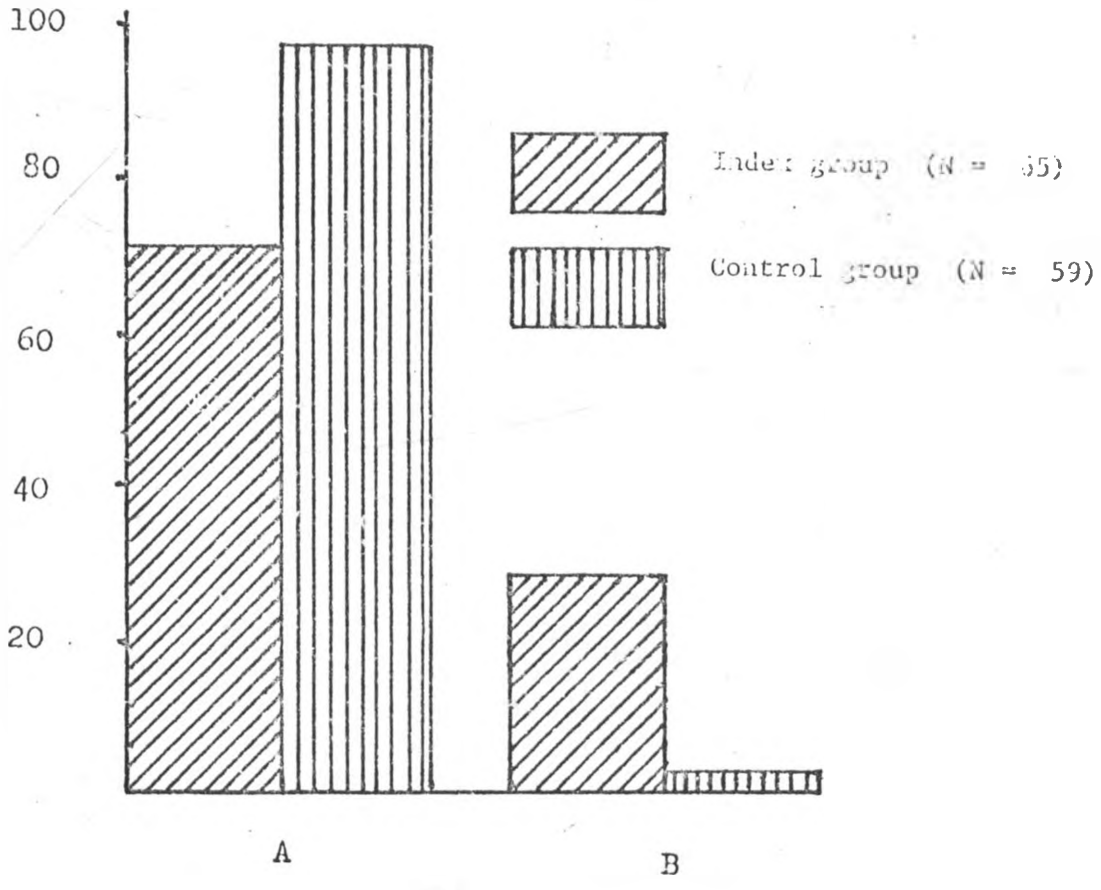


Figure IV

Distribution according to utilisation of health facility during delivery

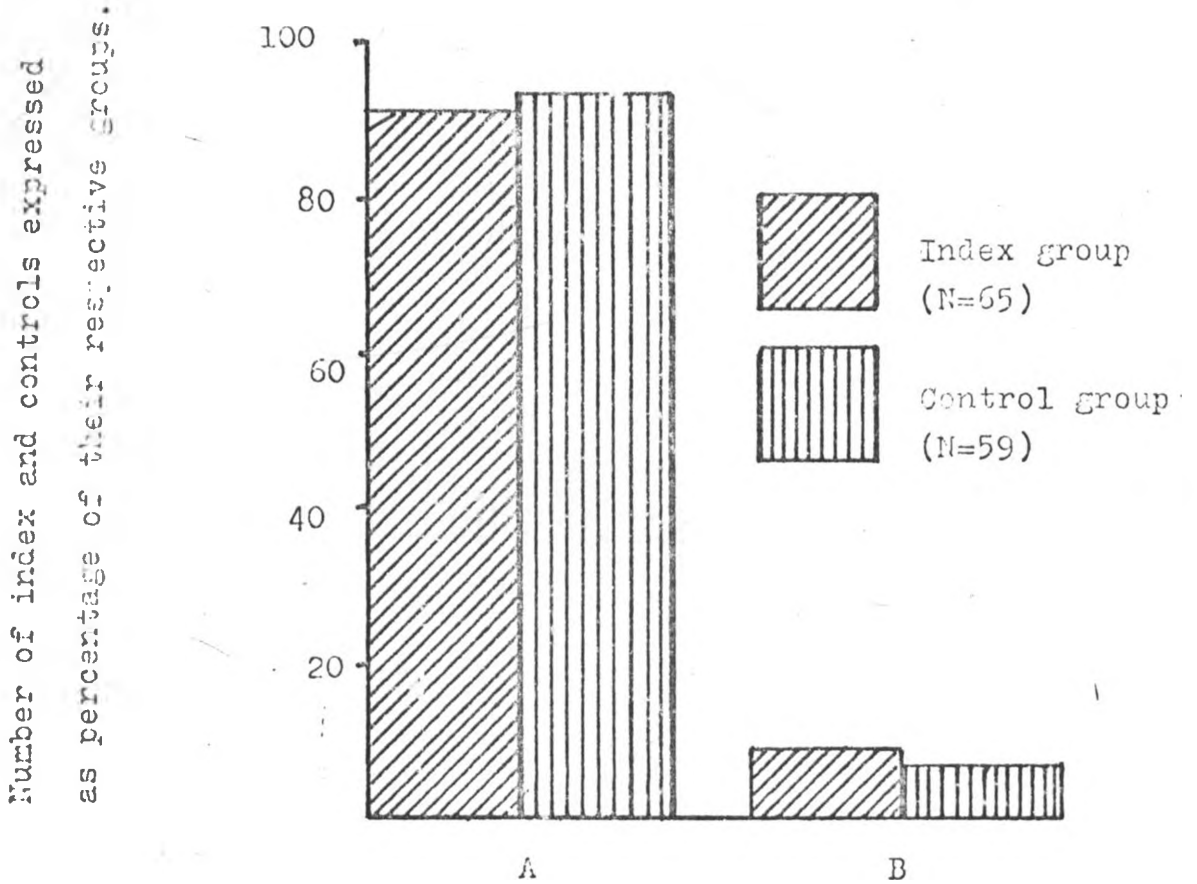


A = Delivering in health institution

B = Delivery at home

Figure V

Distribution according to the duration of labour

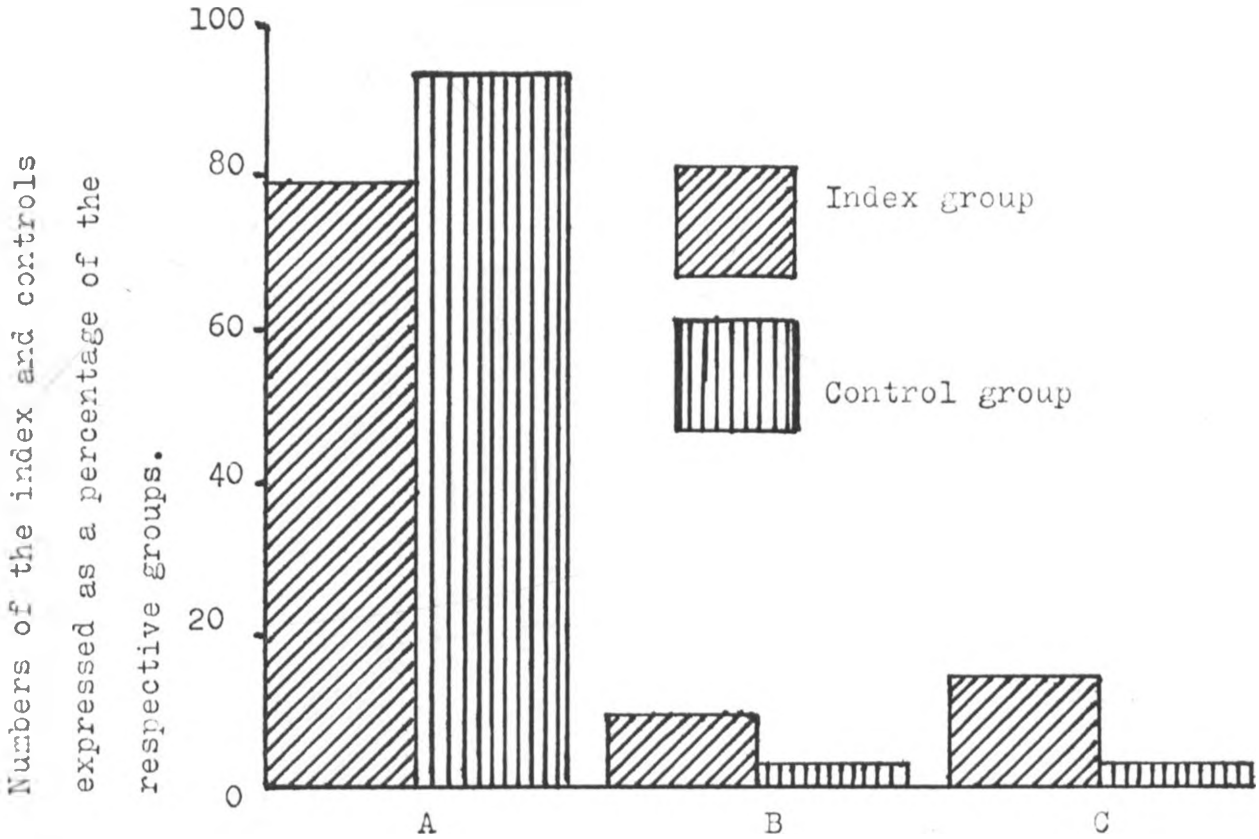


A = Normal labour

B = Prolonged labour

Figure VI

Distribution according to type of delivery



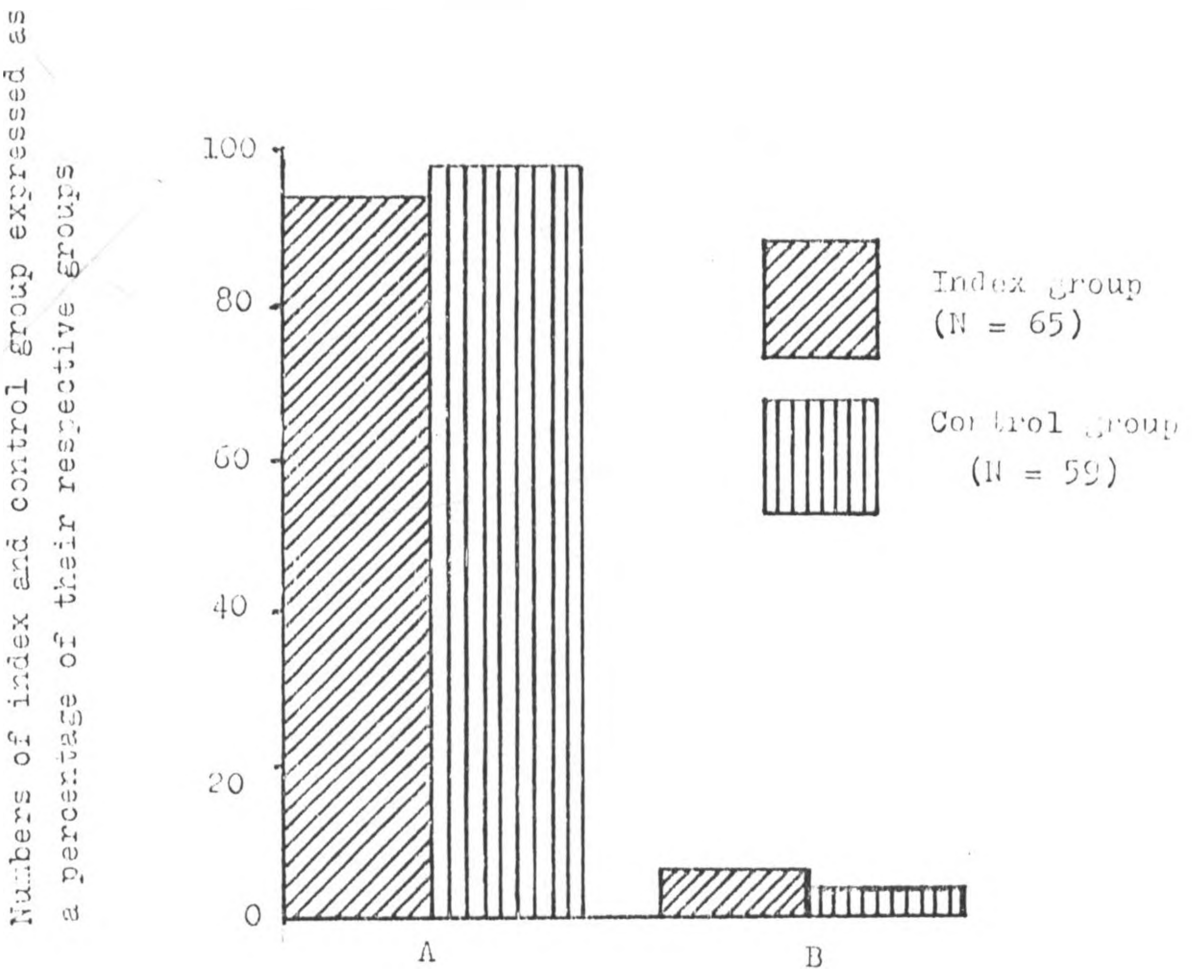
A = S.V.D. (Spontaneous vaginal delivery)

B = Assisted delivery

C = Operative delivery

Figure VII

Distribution according to use of Antenatal care services

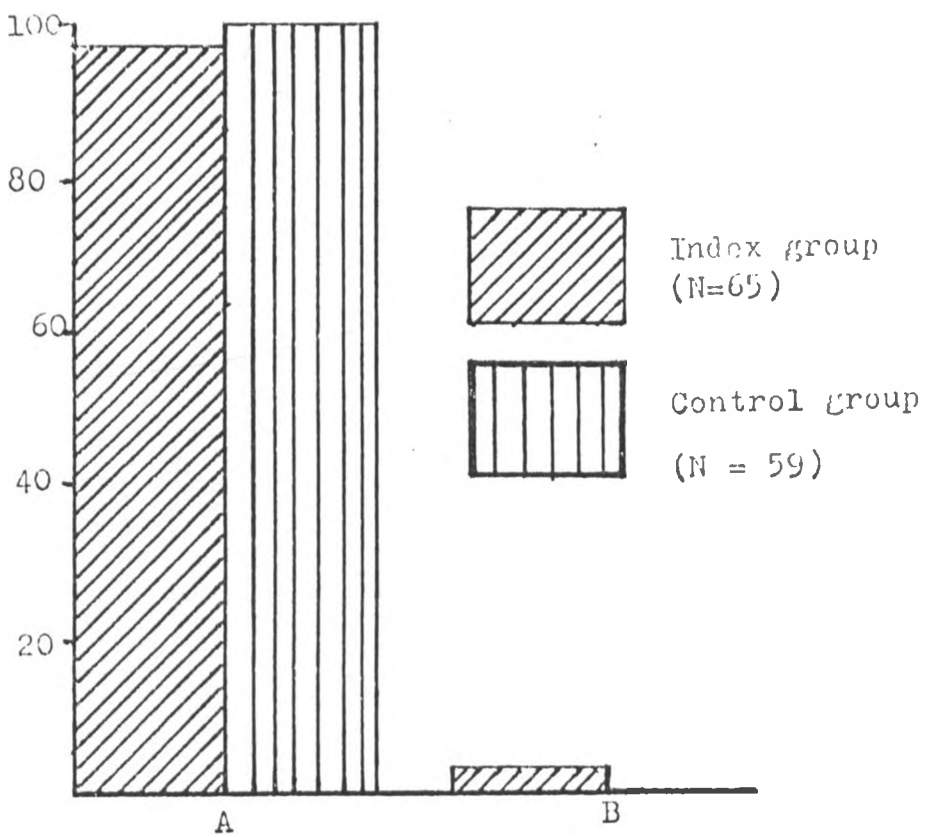


A = Use of Antenatal services
B = Without use of antenatal services

Figure VIII

Distribution according to use of traditional medicine.

Numbers of the index and control groups expressed as a percentage of their respective groups.



A = Without traditional medicine

B = With traditional medicine

Figure IX.

Distribution according to period of onset of symptoms of the index group

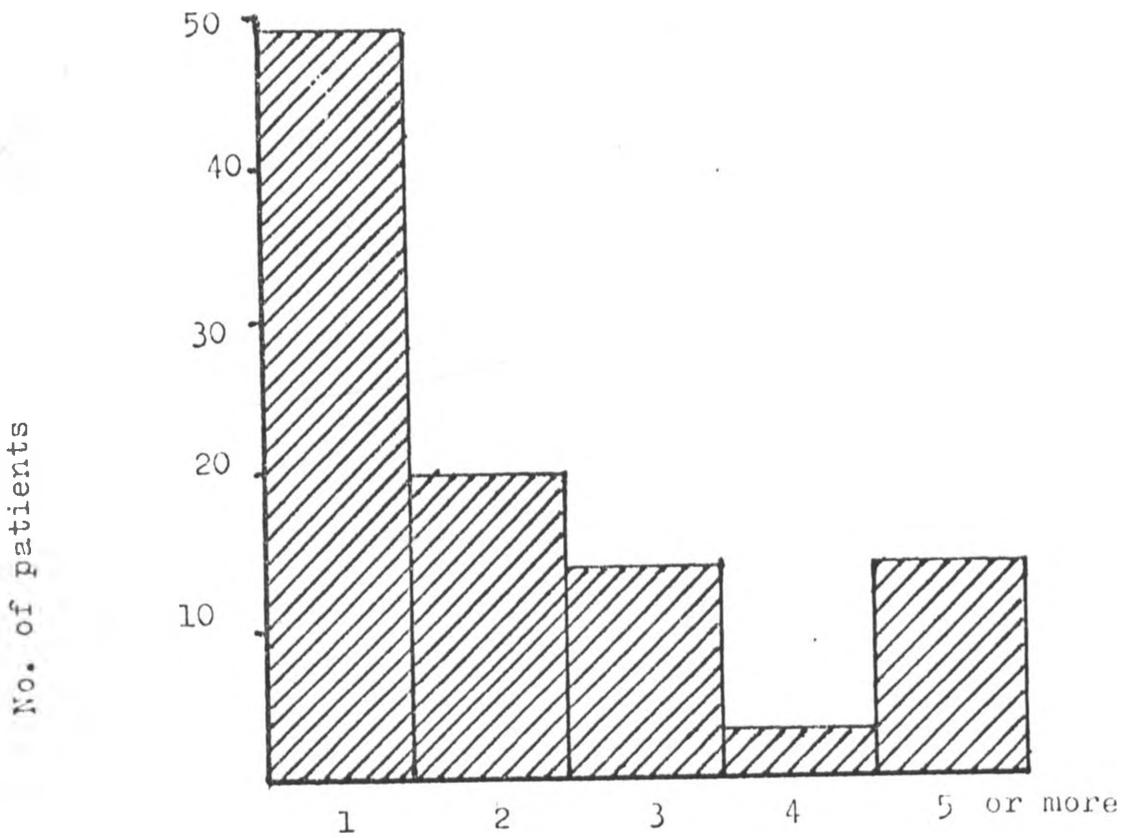
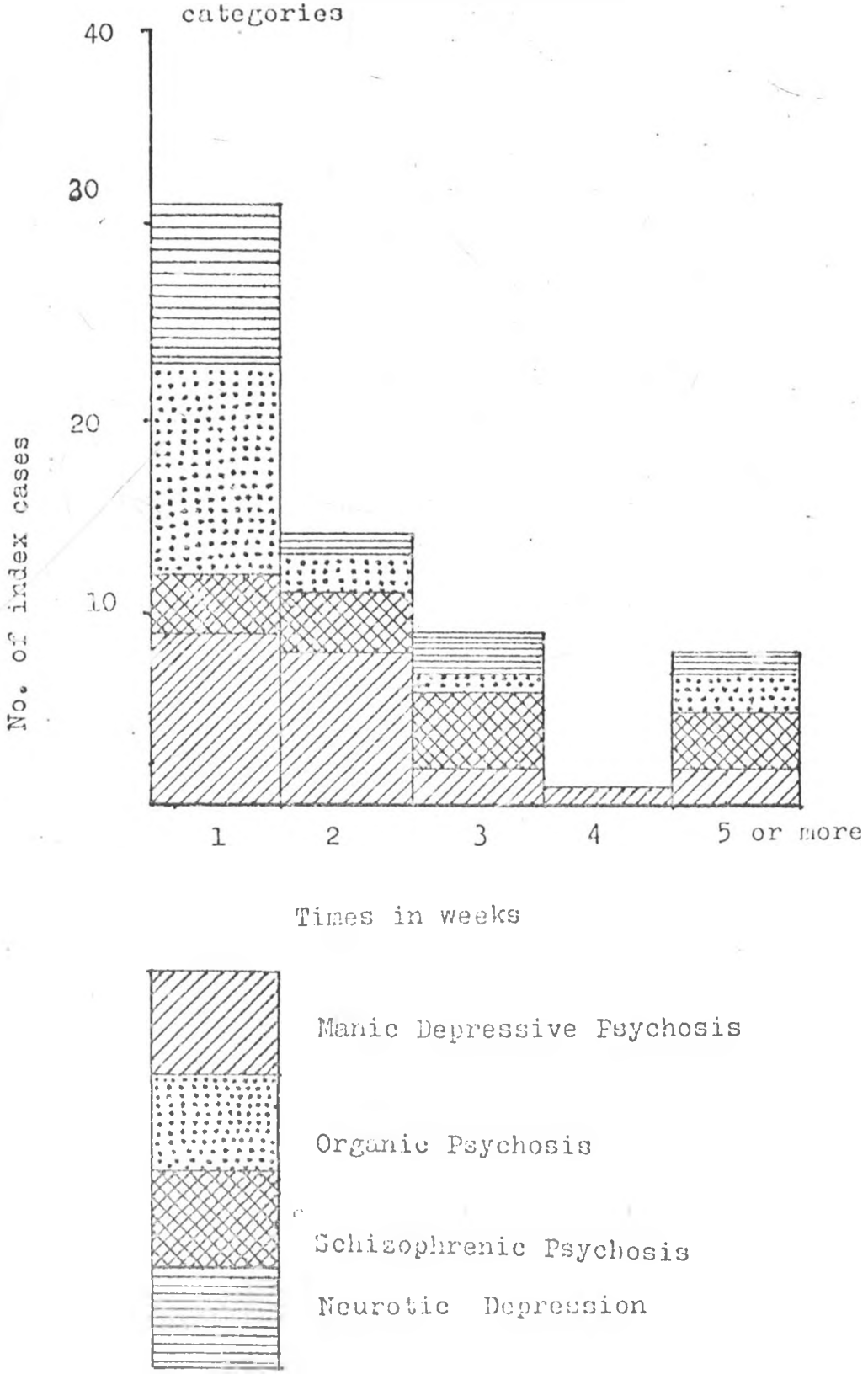


Figure X.

Combined distribution of the time of onset of symptoms for the index cases in the diagnostic categories



Number of patients expressed as a percenta

of the index group

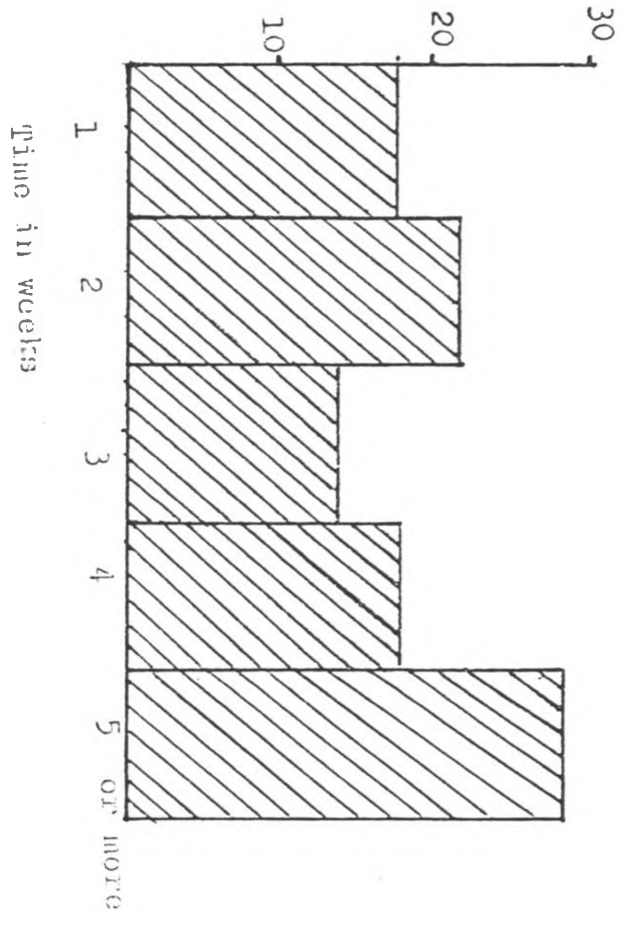


Figure XI

Distribution according to stay in hospital

Figure XII

Combined distribution of the Index cases in their diagnostic categories according to period of stay in hospital.

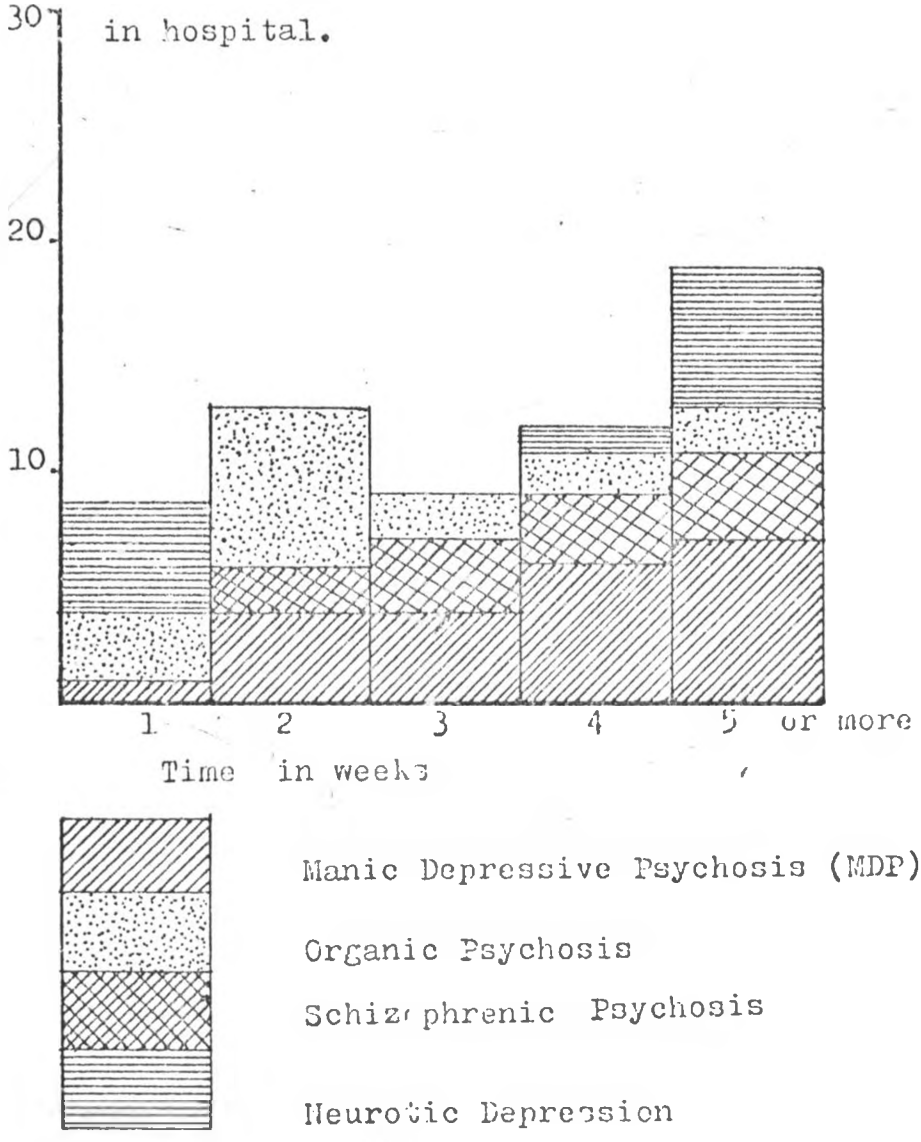
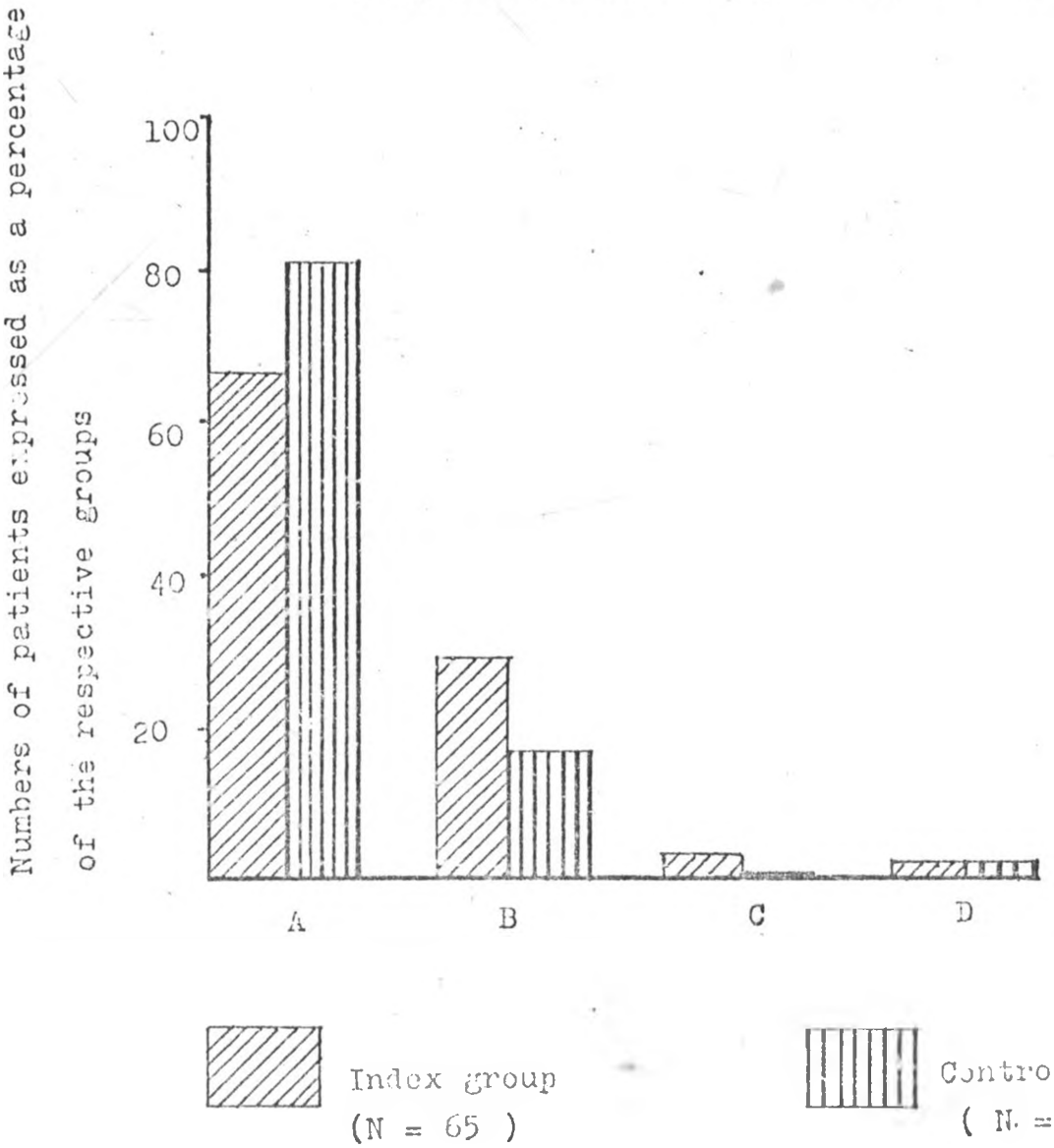


Figure XIII

Distribution according to marital status

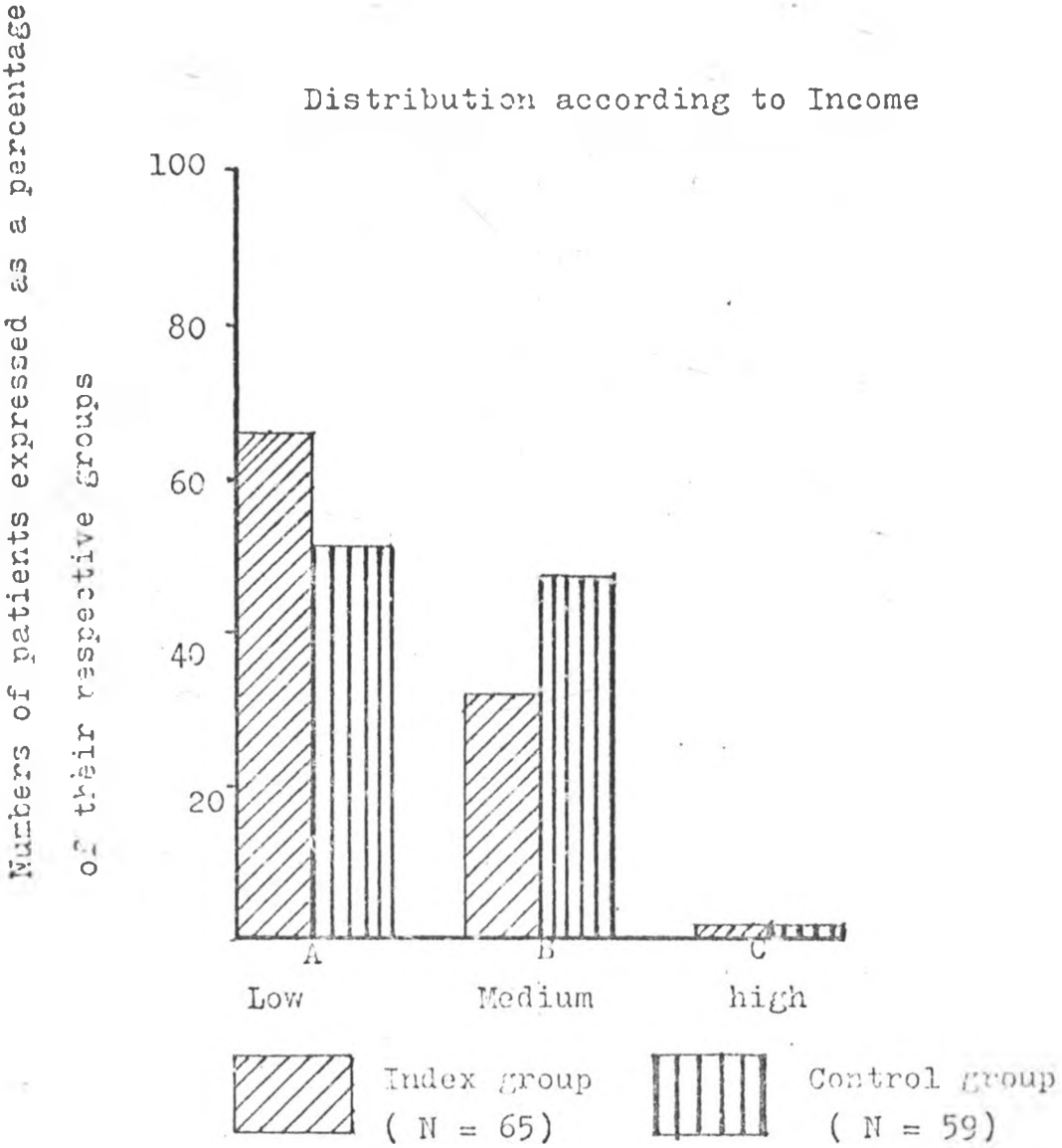


A = Married

B = Single

C = Divorced

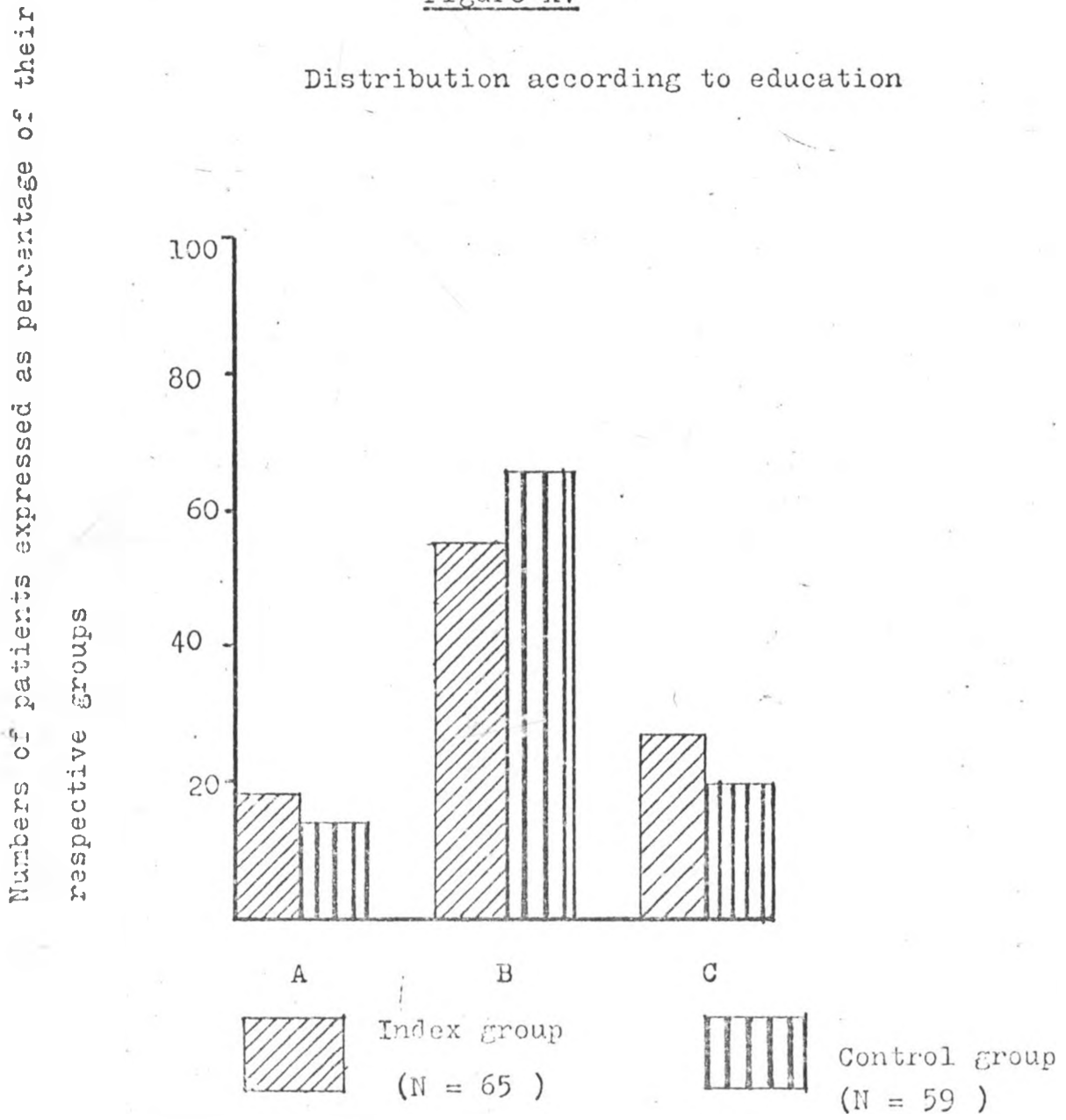
Figure XIV.



A = Low

Figure XV

Distribution according to education



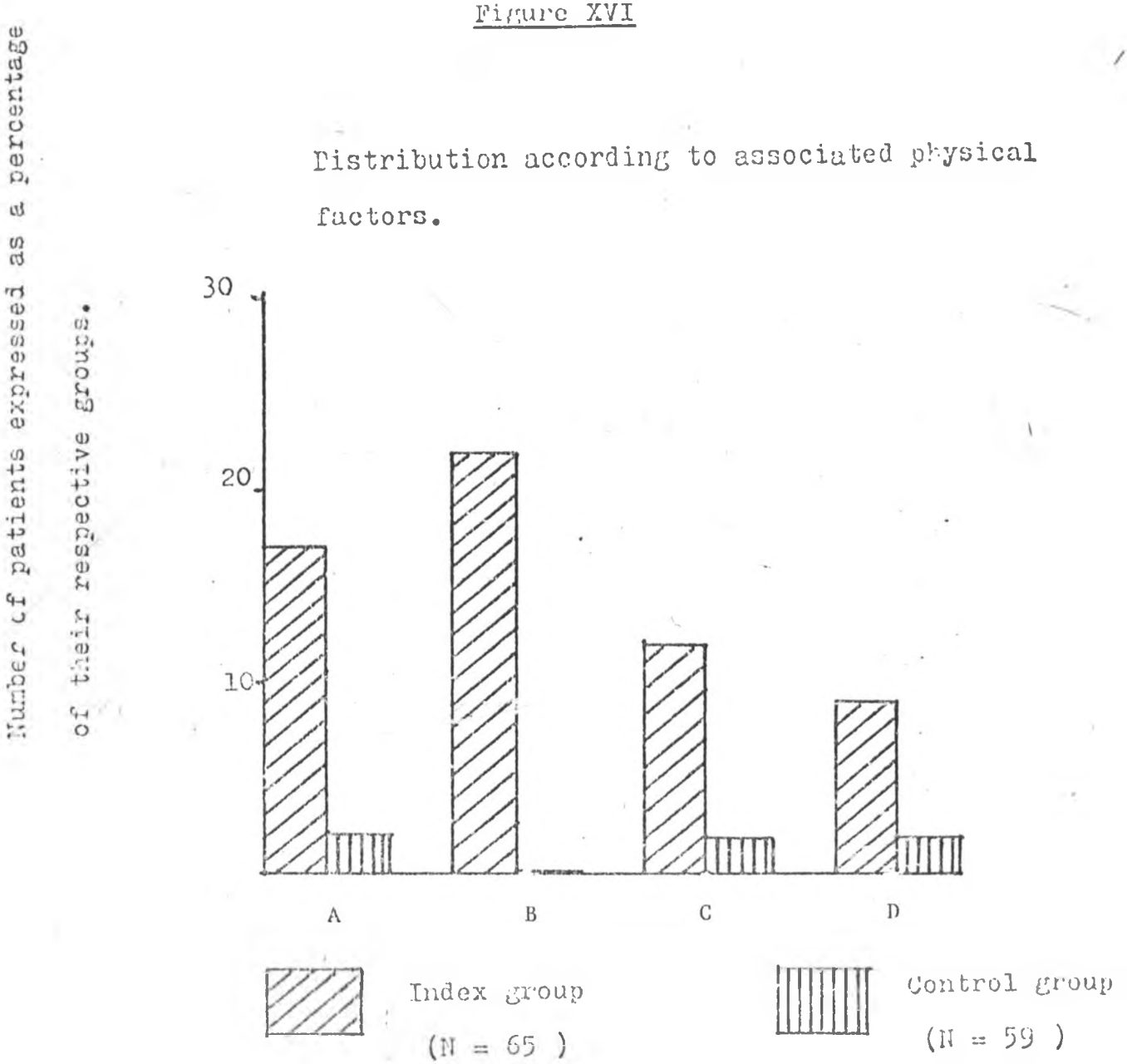
A = Illiterate

B = Primary

C = Secondary

Figure XVI

Distribution according to associated physical factors.



A = Anaemia

B = Puerperal Sepsis

C = Pre-eclampsia

D = Hypertension

CHAPTER IV

DISCUSSION

I. LIMITATIONS AND CONSTRAINTS

1. Limitations due to the source of the sample have been outlined earlier (chapter two). Nairobi abounds in private hospitals, nursing homes, maternity homes and private clinics whose patients are very difficult to have access to for research purposes. This greatly reduced the number of cases who could have been available for the study.

2. The nature of postpartum mental illness dictates that many cases will be missed from the study. The majority of the psychoses develop several days after childbirth when patients have been discharged from the maternity hospitals or maternity units or homes and have options of attending any type of health service (traditional healer, private or public medical treatment); in this way many patients were not available to the study.

Most of the mild forms of postpartum mental illness not seeking psychiatric treatment have no contact with psychiatric services and were therefore not available for inclusion in the study. This must have greatly reduced the minor mental disorders.

Psychiatric disorders with quick resolution were not available for the study because the disorders resolved before contact with psychiatric services, or were not recognised as such and quickly resolved under the guise of physical illness.

3. Although there was a guideline for patients to be included in

the study, selection also depended on the concept of what a psychiatric disorder was to the midwives and nurses who "booked" most of the cases for the author at Pumwani Maternity Hospital and Kenyatta National Hospital (where the criteria for selection of patients were used, as opposed to Mathari Psychiatric Hospital where these criteria were uncalled for). For the midwives and nurses who never had psychiatric orientation during their training, psychiatric disorder was synonymous with psychosis. Many neurotic disorders and other mild forms of mental illness must have slipped through the net.

4. Follow-up of the patients who did not stay more than two weeks in the hospital was only one postnatal visit, two weeks after discharge from the hospital. In this way some patients were lost and excluded from the study with the assumption that some of these could have been experiencing maternity blues for which the patients did not see the necessity of coming for follow up when symptoms had abated.

5. The diagnoses were made by the author alone (psychiatric registrar) using a standardised psychiatric interview and the ICD 9. It is quite possible that cases diagnosed as transient organic psychoses could either be schizophrenic psychoses of acute onset with organic colouring which went into complete remission, or brief psychotic episodes which could not be differentiated from the organic psychoses and vice versa. This might have affected and distorted the true picture of the proportions of the illness in the study.

6. The period of study (only 7 months) was too short for a follow up to separate psychotic depression which is not part of bipolar affective disorder. The short period was also a factor in limiting the index cases to the small number of only 65.

7. Due to high costs of transport and the meagre resources available to the author, it was not possible to enlarge the "catchment area" to include the numerous Nairobi City Council Maternity units where the majority of normal deliveries take place and therefore the numerous postnatal disorders developing after discharge from hospital could not be detected and be included in the study.

II. GENERAL FINDINGS

1. Occurence of the Different forms of Postpartum Mental Illness

The forms of postpartum mental illness which were encountered included affective disorders (manic depressive psychosis), organic psychosis, schizophrenic psychosis and neurotic disorders. These included all the forms of postpartum mental illness reported elsewhere by other workers (Swift, 1972; Ebie, 1972; Tetlow, 1955).

Affective psychoses (manic depressive psychosis ICD 9 - 296 + 648.4) was the form most predominant. The 22 cases found formed 38.5% of the total. There were 17 manic types and 5 depressive types. This finding supports the finding of other workers that affective psychoses predominate in postpartum psychoses (Protheroe, 1969;

Brockington et al,(1981); Kendell et al, (1981); Katona (1982); Meltzer and Kumar 1985). This finding is in contrast with the African studies (Ebie; 1972 and Swift, 1972) which found schizophrenic psychoses predominant. Few Western studies have found schizophrenia to predominate (Foundeur et al , 1957; Madden et al, 1958 and Seager 1960). Da-silva and Johnstone (1981) found an equivalent incidence of schizophrenia and affective psychoses in their study of women with severe puerperal illness.

It is the opinion of the author that affective psychoses predominate in postpartum mental illness; the different findings by the African authors and the few Western studies can be accounted for by the diagnostic approaches and the fact that the two African studies were both retrospective and therefore suffered from all the shortcomings of retrospective studies.

Organic psychosis (Transient organic psychosis ICD 9 293 + 648.4) was the next commonest form of postpartum mental illness. With 16 cases it formed 24.6% of the total cases. This is in agreement with the two African studies in Dar es Salaam, Tanzania (Swift, 1972) and Ibadan, Nigeria (Ebie,1972) both of which found organic psychoses the next commonest form of postpartum illness after schizophrenia. Swift (1972) found 37% and Ebie,(1972) 23%. In the West it has been observed that organic psychosis has been decreasing in incidence over the years Protheroe ,(1969) Meltzer et al,(1985) but Foundeur et al, (1957) argue that reduction in incidence is not real but due to the fact that most of the organic psychoses are now included in schizophrenic psychoses. Jacobs (1942)

points out that modern chemotherapy in puerperal sepsis does not seem to have materially reduced the incidence of psychotic breakdowns. The workers reporting the reduced incidence attribute the fall to modern effective antibiotics and improved antenatal and obstetric care (Baker, 1967). The author is of the opinion that organic psychoses are quite common despite the good antenatal and obstetric care and this is supported by the findings of the present study which shows that 94% of the patients had antenatal care in health institutions and only 6% didn't and only 4 patients with organic psychosis delivered at home but were later sent to hospital on the same or second day. There was no significant differences between the index and controls in the use of antenatal services and in the use of health institution for deliveries. The differences in the proportion with other African studies may be due to the fact that they were retrospective studies and the attendant difficulty in distinguishing this diagnostic group from schizophrenia and affective psychoses with marked organic colouring (see limitations and constraints).

Schizophrenic psychosis (ICD 9 - 295 + 648.4) like neurotic depression was third commonest in the present study. There were 12 cases forming 18.5% of the total index cases. This contrasts with the two African studies which found schizophrenia the commonest form of postpartum mental illness. In Swift's (1972) cases of 40 women, schizophrenia formed 53% and in Ebie's, (1972) 61 women, (28%) were schizophrenic. Some Western studies have, like the two African studies, found schizophrenic psychoses to predominate (Foundeur, 1957; Madden, 1958 and Seager, 1960).

More recent studies in Western countries show that schizophrenia is forming smaller proportions of postpartum psychoses, thus Meltzer and Kumar in 1985 found that schizophrenia formed 6% of 142 women studied in a retrospective study, the majority (80%) being affective psychoses.

The other diagnostic category was neurotic disorder which had 15 patients. Twelve were given the diagnosis of neurotic depression (ICD 9 300.4 + 648.4) and formed 18.5% of the sample, equal to schizophrenia. There were two cases of anxiety state and one of hysteria. It is quite clear that the neurotic disorders are underrepresented due to the fact that most of the studies in postpartum mental illness are hospital based, and the neurotic disorders commonly not being severe do not seek psychiatric treatment. Many studies have shown great variability of results; thus Strecker and Ebaugh (1926) found 2%, Foundeur et al, (1957) found 25%, Boyd (1942) found 6%, Ebie, (1972) found 6.6%. The figure of 15 cases (23%) in the present study is quite comparable with some workers (Madden et al, 20%. Foundeur et al 25%) but it is still an under representation which includes those who slipped through the net (see source of sample and its limitations).

The finding of 18.5% of the index group to be neurotic depression is expected since several workers have found depression to be quite common in the puerperium thus Cox et al (1982) found postnatal depression to occur in 13% of women in the puerperium and Brice Pitt (1968) found an incidence of puerperal depression of 10.8% and in 1975 pointed out that up to 33% of puerperal women experience depression or anxiety.

A finding of only 2 cases of anxiety state (ICD 9 300.0 + 648.4) was not surprising since anxiety and depression occur commonly together (Freeman,1983) and therefore free forms are rare and these two cases were free of depressive component.

The one case of hysteria (ICD 9 300.1 + 648.4) was diagnosed on the basis of the functional fits. This is a condition whose temporal relationship with childbirth has not been documented (except possibly under the umbrella of neurotic disorders). It is explicable in psychodynamic terms as arising out of conflicts about childbirth and the attendant responsibility.

2. Onset of Symptoms

From table 8 and figure IX it is seen that the majority of the patients (69%) developed symptoms within the first two weeks. This is in agreement with two African studies. Swift (1972) studying psychoses occuring in the puerperium among Tanzanians in a retrospective study found that the peak incidence was two weeks after delivery, and Ebie,(1972) in another retrospective study found that most patients who developed psychiatric disorders in the puerperium developed their symptoms in the first two weeks. One African study however found that the peak incidence of puerperal psychoses (Lawson and Stewart,1970) was after 4 weeks following delivery.

Most workers in Western countries have found similar results to those of the present study (Protheroe, 1969; Brockington,1980; Kendell, 1980; Pitt,1975; Da silva and Johnstone,1981; Herzog and Detre, 1976).

Meltzer and Kumar (1985) point out that there is a growing consensus that in order to qualify as postpartum psyhosis a psychotic illness has to develop within the first two weeks or at most four weeks after childbirth. 86% of the index cases in the present study developed symptoms in the first four weeks after childbirth. The majority of the index cases however (46% of the total) developed symptoms in the first week and some of them were found to be having symptoms soon after delivery implying that the illness might have started antepartum, or immediately after delivery.

3. Period of Stay in Hospital

From table 10 and figure XI it is shown that more than 50% of the total cases were discharged within 3 weeks of admission and more than 70% were discharged at the end of 4 weeks. This compares well with the African studies in which Ebie,(1972) in Ibadan, Nigeria, found that 50% of his patients were discharged within 3 weeks, and Swift (1972) in Tanzania found that 90% of his patients were discharged from the psychiatric unit within one month. Kumar et al (1985) found that the length of stay in their retrospective study of 142 women to be 2 - 19 weeks with a mean of 8.6 weeks. Da silva and Johnstone (1981) in their study of severe puerperal illness found a mean stay of 9 weeks, showing a disparity with the African studies.

The disparity between the length of stay is most probably accounted for by the general level of developmnt in the developing and developed countries. The developing countries with the scarce health facilities and resultant overcrowding have early discharge policies to make room for new admissions while probably the developed countries with their

comprehensive health services would take longer to prepare a patient for discharge. In this study the 28% who stayed for 5 weeks or more were represented in all categories but the neurotic depression and manic depressive psychosis predominated. This is partly in agreement with some European studies which have noted that mild depressions tend to stay longer in hospital and some tend to have late admissions. (Meltzer and Kumar 1985).

4. Organic Colouring (Symptoms of Organic Cerebral Dysfunction)

Confusion, disorientation and perplexity (organic colouring) was present in 17 out of 34 postpartum psychoses, i.e. 50%. This is in agreement with the observations of many workers elsewhere; thus Protheroe (1969) found organicity to be very common but does not give the magnitude, Ebie,(1972) found 25% of his cases, Jacobs,(1942) found more than 50% in her cases. Strecker and Ebaugh, (1926), Karnosh and Hope (1937) all found high proportions of organicity in their cases. In their argument,Brockington et al,(1981) list organicity as one of the symptoms which justify puerperal psychosis to be taken as an entity separate from other functional psychoses which are non-puerperal. Cox (1983) lists organicity as one of the specific symptoms of puerperal psychoses. The present study is therefore in keeping with observations made elsewhere by other workers.

5. Maternity Blues

Severe maternity blues were experienced by 38.5% of the index group.

This is in keeping with the findings of earlier workers who have found the incidence of maternity blues to be between 15% and 80% (Brice Pitt, 1973) of deliveries. There was a statistically significant difference (in comparison) with the control group whose incidence was 12%. This is suggestive of severe maternity blues being associated with some or all the forms of postpartum mental illness.

Cox et al (1982) noted that women with severe postnatal blues were particularly at risk of developing postnatal depression. Pitt (1968) also noted that a high incidence of maternity blues in women with postnatal depression may represent a true association with puerperal depression. Taken separately the diagnostic categories all showed a high incidence of maternity blues, thus there was 33% in neurotic depression, 41% in manic depressive psychosis, 38% in organic psychosis and 42% in schizophrenia. If this is indicative of a true association with postpartum mental illness then severe maternity blues could be predictors of patients at risk of developing postpartum mental illness of one form or another.

III. THE NON-SIGNIFICANT FINDINGS

Age

The index and control groups were not matched for age, they were only matched for time of delivery (within one month) and for those delivering in Kenyatta National Hospital and Pumwani Maternity Hospital for place of delivery.

The mean age for the index group was 22.9 years and that of the control was 23.9 years. The mode for the age of both index and control was the age group 21-25 years and there was no difference in the distribution between the index and control. The mean age coincides with the mean reproductive age in our Kenyan setting. This study differs from some Western studies, for example, Herzog and Detre (1976) found an average of about 28 years in American women with postpartum psychosis. This is a "cultural" difference. Ours is a population with early marriages and childbearing. Only 15% were above 26 years of age (see table I and figure II).

Many authors have not found any association between postpartum mental illness and age although Paffenbarger (1964) found that psychotic mothers were often older than normal puerperal mothers. The present study shows that there is no difference in age between the index group and normal puerperals suggesting that there is no difference in our population in age between women developing postpartum psychiatric disorders and normal puerperal women.

Parity

Table 2 and figure III show clearly that there was no significant difference between the index and the control group in their distribution according to parity. However there was a predominance of primiparity in both the index and the control groups. The index had 48% of the mothers primiparous and a sudden drop to between 11% and 16%

between parity 2 and 5. This finding is in agreement with other studies which have found predominance of single parity in women with postpartum psychiatric disorders, thus Protheroe (1969) found 60%, Kendell et al, (1981) found 62% and Thomas and Gordon (1959) reviewing 13 studies found 54% were primiparas among American women. Swift (1972) found 25% of his cases to be primiparous and was of the opinion that this was a significant proportion. However Cox et al, (1982) found no association between primiparity and puerperal depression and Tod (1964) found parity 3 and above to be predominant in his prospective epidemiological study of puerperal depression. Taken as a group it is clear from the present study that there is probably an association between primiparity and postpartum psychiatric disorder but the significance of this association is not clear but it could at least be of predictive importance.

Duration of Labour

Figure V shows there is no difference in the distribution of the index and control cases according to duration of labour and the proportions with prolonged labour (9% and 7% of index and control group respectively) was too small for any meaningful statistical analysis and obviously there are no statistical differences. Dalton however in 1971 in her prospective study into puerperal depression found that labours of puerperal depressives tended to be longer and were considered to have been difficult although there was no statistically significant difference from the controls.

Antenatal Services

Figure VII shows clearly that there is no statistically significant difference in the distribution of the index and control according to use of antenatal services. Only a small proportion of both the index and controls had not used antenatal services in the antenatal period. In this study with almost 100% of antenatal service utilisation, it is clear that the postpartum psychiatric disorders are independent of use of antenatal services. Tetlow, (1955) however attributed the fall in incidence of organic psychoses in Western countries to better modern obstetric services. While this can be accepted for organic psychosis and probably even other psychiatric disorder, the present findings suggested the multiple aetiological factors importance in postpartum mental illness, hence even with full use of antenatal services the psychiatric disorders in the postpartum period still occur.

Use of Traditional Medicine

Only 2 index cases used traditional medicine during labour and none in the control group. The small number of cases prohibited any inferences to be drawn. This investigation was done following earlier allegations that the postpartum psychoses in the tropics were partly caused by the use of traditional medicine during labour (Lawson and Sterwart, 1970). From the present study the observation made is that there is almost no use of traditional medicine in the antenatal period or during labour in the study group which is most probably true of the community living in Nairobi. Further studies to test the validity

of aetiological role of traditional medicine in postpartum mental illness as suggested by Lawson and Stewart in 1970 need to be done.

Socioeconomic Factors

There was no difference in the distribution of the index and control groups according to marital status (see table 4 and figure XIII). Most authors now consider that extramarital conception does not contribute to the development of postpartum mental illness (Paul,1974), although studies before the 1940s found a high incidence of illegitimacy (Protheroe,1969). Statistical analysis in this study showed no difference between the economic and educational status of the index and control groups (see tables 5 & 6 and figures XIV & XV). However the two groups are a select group in the two variables of education and economic ability (since in our setting education sets up the pace for economic success) as pointed out earlier in "source of the sample and its limitations". (see chapter II).

Tnuwe,(1974) noting occurence of mental illness among all children and grandchildren of a group of women undergoing a first episode of postpartum psychosis within 6 weeks of childbirth found that the affected children and their mothers clustered in the higher social levels. He however explained this away statistically and by the fact that the higher socioeconomic group have higher psychiatric service contact which gives a false apparent higher prevalence. The present study shows there is no difference in socioeconomic status among patients with postpartum mental illness from normal puerperals.

Predisposing Personality Factors

The predisposing personality factors among the index and control groups were evenly distributed. There were no statistically significant differences when the distribution of the index and controls was analysed factor for factor (see table 14). The present findings therefore suggest there is no personality predisposition to postpartum mental illness.

Some workers have suggested that there are predisposing personalities to postpartum mental illness (see literature review) but the evidence has not been convincing and repeat studies could not be done. However this was in the early studies on postpartum mental illness when workers were trying to establish that postpartum mental illness was an entity. The present study is therefore in agreement with studies which did not find a predisposing personality to postpartum mental illness.

Some previous authors have found predisposing personalities to mental illness in general but not specific to postpartum mental illness; thus Tetlow (1955) in his study of psychoses of child bearing found that women most vulnerable included those with specific difficulties concerning sexual activity, mothering and reproduction but his findings had no significant differences with controls of non-puerperal psychotic patients implying the difference he had found with a control group of normal puerperals was not specific to postpartum mental illness. Seager,(1960) studying the same predisposing factors as the present author (i.e. anxiety proneness, obsession, extraversion, childhood

neurotic traits and schizoid personality) found a highly significant difference with a control group of normal puerperal women but he found no significant difference with non-puerperal psychotic women.

The present study findings suggest that there is no predisposing personality to postpartum mental illness. However the finding of no difference with normal puerperals is probably due to the fact that the definition of the predisposing factors was not very rigorous and the fact that the normal puerperals probably gave affirmative answers to questions regarding the presence of these factors because they most probably believed that that is what the author wanted to hear from them.

In conclusion of his study on psychoses during the puerperium among Tanzanians, Swift, (1972) made an impression that some people have a personal vulnerability to stress which predisposes to psychosis.

IV. SIGNIFICANT FINDINGS

Place of Delivery

The results of this part of the study are discussed under significant findings because some inferences can be made without comparison with the control group which in this aspect is a biased hospital group. Looking at figure IV, a significant number of the index group 19 (29%) delivered at home with bad obstetric care. Out of the 19 home deliveries 8 (42%) had puerperal sepsis. Of the 19 cases 8 (42%) had organic psychosis. This finding is in indirect support of suggestions by earlier workers (e.g. Tetlow, 1955) that organic psychosis in the

puerperium is less frequent in the West due to improved obstetric care and that organic psychosis still occurs significantly in developing countries (Ebie, 1972; Swift, 1972; Gupta and Agarwal, 1975).

It is the author's opinion that the 29% home deliveries of which 42% had puerperal sepsis is significant and probably shows a real relationship of postpartum mental illness with home delivery in the present study, implying infection due to poor obstetric care to be important.

Type of Delivery

Table 3 and figure VI show the distribution of the index and control group according to type of delivery. 15 (23%) of the index group and 4 (6%) of control group had instrumental assisted delivery or caesarean section and this difference was significant (P = 0.04 04). Although earlier workers (e.g. Tetlow, 1955) mention that complications of pregnancy do not contribute to causation of postpartum psychoses and more recent workers (Pitt, 1968; Cox et al, 1982) have found no relation between obstetric complications and postpartum depression, the author feels this finding might be indicative of a real association between postpartum psychiatric disorders and instrumental assisted deliveries and operative deliveries. However due to the methodological shortcomings and the small number of cases involved the present findings should be interpreted with caution.

Stengel et al (1952) in their study of postoperative psychoses say these psychoses have many similarities with puerperal psychoses and conclude that the operation acts as a precipitating factor of the

postoperative psychoses. Accepting the above conclusion the present findings could be due to the precipitating effects of the operations and other instrumental deliveries and should therefore be taken as risk factors for postpartum psychiatric disorders.

Cox,(1983) lists operative delivery as one of the predictors of postpartum psychoses (puerperal psychoses), but he says the women undergoing operative delivery are not more likely to develop depression in the puerperium than other women.

The author believes that these findings show a real association between postpartum mental illness and operative and instrumental deliveries but the relationship is not directly causal but is of precipitating role. The contribution of anaesthetic drugs is not certain but these drugs are taken as part and parcel of the operations and instrumental manoeuvres.

Physical Factos

Physical factors in form of obstetric factors have been considered earlier. In addition there were physical complications of child-bearing which were encountered. These complications included anaemia (in this study ranged from a haemoglobin of 3.5 to 6.0 gms, all requiring transfusion), puerperal sepsis, pre-eclampsia and hypertension. Table II and figure XVI show clearly that the physical complications occured more commonly in the index group than the control group. The total number of index cases of 29 (44.6%) with one or more physical

complications was quite significant and there is a highly significant difference with 3 (5%) of the controls who had physical complications ($P = 0.00153$).

Workers on postpartum mental illness elsewhere before have found physical complications occuring in significant proportions of their cases. Protheroe,(1969) in a retrospective study found 28% of his patients with puerperal psychosis to have physical complications which included pre-eclampsia, pyrexia of unknown origin, antepartum haemorrhage (anaemia) and others. He found that the physical complications were outstanding in the organic psychoses. Jacobs,(1942) in her case study of reaction types in psychoses following childbirth noted that pre-eclampsia and puerperal sepsis were associated with delirious reactions and later developed into confusion. She however found 7 cases with organic psychosis without evidence of physical complications of the puerperium. Over all she noted that sepsis in the puerperium was relatively unimportant as a factor precipitating psychosis unless it is complicated by other prdisposing factors. Ebie (1972) noted in his series that a high proportion had either febrile illness or some other physical factor, and there was a high proportion of confusional states (organic psychosis). Swift,(1972) found 37% of his series had physical complications which included sepsis, postpartum haemorrhage, hypertension and pre-eclampsia which are the same complications found in the present study. He also found that organic psychosis was the next most common type of postpartum psychosis. He concluded that in conjuction with other stresses in predisposed

individuals physical complications are of aetiological importance in postpartum psychoses.

The findings of the present study are in agreement with the above cited studies in that physical complications encountered in previous studies were found in this study.

Based on the present findings there appears to be a relationship between physical factors during the postpartum period and the occurence of postpartum psychiatric disorders. From profiles of patients with each diagnosis (tables 15-18) it is seen that the association of physical factors was higher with organic psychosis suggesting a possible causal relationship. The occurence of the physical complications in all diagnostic categories implies a possible aetiological role in the whole spectrum of postpartum psychiatric disorders, both the psychoses and the neurotic disorders, especially neurotic depression which was the commonest neurotic disorder encountered.

Hereditary Factors

Hereditary indicators are difficult to detect. The most commonly accepted indicator is the positive history of the same mental illness in the nuclear family or second degree relatives. This has got its shorts falls since non genetic psychiatric conditions like organic psychoses and reactive disorders may be taken for positive histories. Simply being given positive statements by relatives or neighbours of mental illness or a history of a visit to the native healer could also be

erroneous and therefore unreliable. The closest the author could get to the true positive history of mental illness was to take a positive history as being one where a relative had had psychiatric service contact in form of hospital admission and/or treatment as an out-patient. Using this rigorous criteria the distribution of index and control cases with positive family history was as shown in table 12, with 13 index cases positive as opposed to 4 positive controls. There were significantly more index cases positive for family history of mental illness than the controls indicating positive hereditary or genetic factors in the index group to be of importance in predisposition.

From the profiles of patients with the different diagnoses it is seen that there was high hereditary loading in schizophrenic psychosis and manic depressive psychosis in which positivity was respectively 50% and 36%. On the other hand genetic predisposition was not important in organic psychosis and neurotic depression in which hereditary factor positivity was respectively 13% and 8% (see tables 15 - 18).

The hereditary loading found in the functional psychoses (schizophrenia and manic depressive psychosis) in this study (20%) compares well with the findings of other workers who have done studies on postpartum psychosis before. Thus Cruickshank (1940) found 42%, McNair (1952) 35%, Meltzer and Kumar (1985) 40%.

The low positivity for heredity in neurotic depression is in agreement

with other workers like Tod (1964) and Jansson (1964) who found no hereditary predisposition in puerperal depression in their studies although other workers (e.g. Pitt 1968) have reported hereditary predisposition in puerperal depression.

The low positivity of family history of mental illness in organic psychosis in the present study is in agreement with Thuwe (1974) who concluded that heredity plays little part in organic psychosis.

The present findings therefore show that there is hereditary predisposition in postpartum psychoses excepting organic psyhosis and that hereditary predispostion is not important in postpartum neurotic depression and possibly other neurotic disorders for which there were not enough cases for inferences to be made (i.e. there were only 2 cases of anxiety state and one of hysteria).

Psychological Factors

The supposedly stressful factors occuring in our setting were investigated. Table 13 shows the distribution of these factors among the index and control groups in a descending order of frequency. From the table it is seen that all the factors were present in one or more of the index cases but the frequency of the factors among the index group was high from factor one to five (i.e. unwanted pregnancy, premarital pregnancy, aversive attitude to husband, recent stressful event and unpreparedness for motherhood). There were only

14 index cases without a stress factor (21.5%) as opposed to 27 (45.8%) of the control group. There were 51 (78,5%) of the index group positive for stress factors compared to 32 (54.2%) of the control group. These figures all point to the excess of the psychological stress factors in the index group when compared to the control.

Compared factor for factor in the two groups there were significantly more index cases in factors 1,3 & 5 ($P = 0.02$, 0.0033 & 0.006 respectively). The rest of the factors showed no significant differences in the distribution of the index and control group.

All these differences above are suggestive of a real difference in the occurrence of the stressful psychological factors. It is however difficult to say there was significantly more stressful contribution in the index than the control group as a whole especially when the factors were not mutually exclusive.

However the present findings have some comparison with other workers elsewhere. Thus Swift (1972) found 13% of his series had some Psychological trauma. The present figure of 78.5% is much higher than that of Swift probably due to the differences in type of study, his being retrospective and therefore the 13% represents the cases with major psychological trauma while the present was prospective and aggressive in eliciting even the minor psychological factors. Jacobs (1942) reports 95% of her cases to have had psychological difficulties but does not list the factors involved.

Some workers for example Protheroe (1969) did not find evidence of psychological trauma and some like Seager did not find evidence of stress factors which were environmental in origin. The present study however shows some evidence of the aetiological role of psychological stress factors, especially the first 5 factors out of the 10 factors investigated, that is unwanted pregnancy, premarital pregnancy, aversive attitude to husband, recent stressful event and unpreparedness for motherhood. These factors merit treatment as predictors of patients at risk of developing postpartum psychiatric disorders.

Present findings are highly suggestive of an important aetiological role of psychological stress factors.

CONCLUSIONS

The present study shows that all forms of postpartum mental illness reported elsewhere (for example Tetlow,1955; Protheroe,1969; Foundeur et al,1957; Madden et al,1958; Swift,1972; Ebie,1972) occur in our local setting here in Kenya. Affective psychoses are the most predominant forms of postpartum psychosis followed by organic psychosis and schizophrenic psychosis in that order. Neurotic disorders do occur quite commonly and neurotic depression (postnatal depression) is the predominant neurotic disorder occurring in the postpartum period.

The peak incidence of postpartum mental illness is in the first two weeks following childbirth. Nearly all patients developing postpartum mental illness will have developed symptoms by the fourth week.

Symptoms of organic cerebral dysfunction (oganicity or organic colouring) occur in the initial stages of a very high proportion of postpartum psychoses.

Severe maternity or postnatal blues do occur in the whole spectrum of psychiatric disorders both in the psychoses and neurotic disorders. About one third of the cases experience severe maternity blues.

The majority of patients (about 75%) admitted to hospital with postpartum mental illness will have been discharged after about four weeks and this applies to the whole spectrum of the different forms of postpartum mental disorders.

It seems delivering at home and having operative or instrumental assisted delivery are risk factors for developing postpartum psychosis in women with predisposition.

There is a very high relationship of physical complications of the postpartum period and postpartum mental illness and this relationship appears more important and probably causal in organic psychosis.

Hereditary factors are important in postpartum psychoses (excepting organic psychosis) but do not appear to be important in neurotic disorders and organic psychosis.

There is significant psychological trauma in all cases of postpartum psychiattric disorder which probably plays a precipitating role together with other factors.

Primiparity is predominant in postpartum psychiatric disorders and deserves to be used as a risk predictor for women liable to develop the disorders.

Based on present findings there are no predisposing personality factors for postpartum psychiatric disorders and there is no relation of postpartum psychiatric disorders with age, duration of labour, use of antenatal care services and socioeconomic status of the patients.

CHAPTER V

(a) Preventive Measures and Services

One of the most important preventive measures for adverse effect of postpartum mental illness which also applies to non-postpartum mental illness is early intensive treatment. Using findings of the present study that the peak incidence of the illness is in the first two weeks after childbirth, a postnatal confinement close to two weeks depending on practicability should be provided for mothers at risk. This period can then be followed by close follow-up possibly weekly at least for four weeks. Mothers delivering at home should also be followed up closely for the same period or more depending on the individual risks estimated. Risk predictors for detection of those at risk derived from the findings of the study are (1) home delivery, (2) instrumental assisted delivery and/or delivery by surgical operation (3), severe postnatal blues (4), physical complications of the puerperium (5), positive heredity for mental illness as shown by family history of mental illness, (6) presence of psychological stress factors and (7) primiparity. These risk predictors should be identified at the first contact with the mother in the ante-natal, intra-natal or postnatal period.

Detection of any treatable factors should be followed by appropriate treatment. Any psychological stress factors identified should be treated intensively with the treatment directed towards establishing a healthy attitude towards childbirth, development of sound maternal attitude and the removal of acute conflicts arising from the marital

situation and the psychotherapy should be extended to the husband and people living with the mother.

Puerperal depression (neurotic depression) which has been shown to be one of the commonest disorders of the puerperium by many authors (Cox et al, (1982); Pitt, (1968); and Dalton, 1964) should be kept under surveillance and the mothers at risk can be put on prophylactic antidepressants and supportive psychotherapy.

The services availabble in the country which could be of central importance in the prevention and control of postpartum psychiatric disorders are the midwifery servies and the maternal and child health services which are widespread in the country up to dispensary level. These services are manned by the midwives and trained nurses who are the primary health care givers in contact with mothers who develop postpartum psychitric disorders.

Unfortunately in the past both the midwives and the various grades of nurses have undergone training deficient in mental health in general and postpartum psychiatric disorders in particular but there are substantial improvements now. The first step therefore in strengthening the preventive measures against postpartum psychiatric disorders is to include a comphrehensive mental health programme in the training of nurses and midwives with special emphasis on the recognition and treatment of psychiatric disorders after childbirth at primary health care level.

Restricted prescribing and dispensing of psychotropic drugs should be allowed to nurses and midwives in contact with postnatal mothers due to the persistent shortage of psychiatrists and doctors in general who are not available at primary health care level. Psychiatrists should effectively be utilised as teachers of these primary health care cadres, and should strive to include comprehensive chapters on mental health in the relevant nursing and midwifery books. They should also write hand books on psychiatry for nurses and midwives.

Clinical Officers (Medical Assistants) who are the Chief Officers in many institutions of primary health care, especially in rural areas should have proper orientation in psychiatry as much as or more than the midwives and nurses at the instruction of psychiatric specialists. Emphasis should be put on the postpartum period as an increased morbidity risk period.

(b) Further Research

The present study was hospital based and suffered all the drawbacks of hospital based studies on patterns of mental illness in the community. Epidemiological surveys are needed and should be done in our setting to get the prevalence and magnitude of the problem of postpartum mental illness.

Puerperal depression which has been found to be the commonest and disabling complication of the puerperium elsewhere (Cox et al, 1982) needs to be studied in our setting, with the objectives of establishing the incidence and prevalence and formulating management policies.

A postnatal depression scale for detection of postnatal depression in our local setting in Kenya needs to be developed. This will facilitate treatment on an outpatient basis or even in the community of postnatal depression using the upcoming public health nursing services.

REFERENCES

ANDERSON (1933):

Cited in "A Controlled Study of Postpartum Mental Illness"

J. Ment. Sci: 106:214

By Seager, C.P. (1960)

ARMSTRONG-JONES (1923):

Puerperal Insanity

Lancet i: 1296

BAKER. A.A. (1967):

Psychiatric Disorders in Obstetrics

Third Ed. (1967) Blackwell, Oxford.

BOWER, W.H. and ALTCHUTE, M.D. (1956):

New Eng. J. Med. 254: 157

BOYD, D.A., (1942):

Mental Disorders Associated with Childbearing.

Am. J. Obs. Gynae.: 43: 148

BREW, M.F. and SEIDENBERG, R.J. (1950):

Psychotic Reactions Associated with Pregnancy and Childbirth.

J. Nerv. Men. Dis. 11: 408

BROCKINGTON, I.F., CERNIC K.F. SCHOFIELD, E.M. DOWNING, A.R., FRANCIS A.F. and KELAN, C. (1981):

Puerperal Psychosis

Arch. Gen. Psychiat. 38: 829

CLOUSTON (1904):

Clinical Lectures, London

Cited in "Psychoses of Childbirth" in J. Ment. Science 89: 242 By Betty Jacobs (1942)

COGIL, S.R. (1986):

Impact of Maternal Postnatal Depression on cognitive development of young children.

British Medical Journal 292: 1165.

COX, J.L. (1983):

Psychiatric Disorders of Childbirth in "Companion to Psychiatric Studies" Third Editon (Ed. Kendell R.E., Zealley, A.K.) Churchil Livingstone.

Edinburgh, London, Melbourne, New York.

COX, J.L. (1979):

Psychiatric Morbidity and Pregnancy - A controlled Study of 263 Semi-rural Ugandan women.

Brit. J. Psychiat. 134: 401.

COX. J.L., Y. CONNOR and R. KENDELL (1982):

A Prospective Study of the Psychiatric Disorders of Childbirth.

Brit. J. Psychiat. 140: 111

CRUIKSHANK (1940):

Psychoses Associated with Pregnancy and the Puerperium.

Canad. Med. Ass. J. 53: 571

DA SILVA and JOHNSTONE (1981):

A follow-up Study of Severe Puerperal Psychiatric Illness.

Brit. J. Psychiat. 139: 346.

DALTON, K. (1971):

A Prospective Study into Puerperal Depression

Brit. J. Psychiat. 118: 609.

DALTON, K. (1971):

Depression: Emotional or Illness?

Proc. Roy. Soc. Med. Vol. 64 (Dec.1971)

DELAY, J., BOITTELLE, G. and CORTEIL (1948):

Ann. Med. Psychol. 106: 62.

De LEE, J.B. (1929):

Principles and Practice of Obstetri s

PP 216 Fifth Edition, Philadelphia, W.B.

Saunders

EBIE, J.C. (1972):

Psychiatric Illness in the Puerperium anong

Nigerians.

Trop. Geogr. Med. 24: 253.

FREEMAN, C.P. (1983):

Neurotic Disorders in "Companion to Psychiatric

Studies pp 338, Third Edition (Ed. Kendell, R.E.,

Zealley, A.K.). Churchil Livingstone -

Edinburgh, London, Melbourne, New York.

FOUNDEUR, M. FIXSEN, C., TRIEBEL, W., WHITE, M.A. (1957):

Postpartum Mental Illness - A Controlled Study

Arch. Neurol. Psychiat. 115: 503

GUPTA, O., and AGARWAL, S. (1975):

Psychiatric Illness in the Puerperium.

Journal of the Indian Med. Ass. 65: 45.

HEMPHIL, R.E. (1952):

Incidence and nature of Puerperal Psychiatric Illness

British Medical Journal ii: 1232

HERGATY, A.B. (1955):

Post-puerperal Recurrent Depression.

British Medical Journal i: 637.

HERZOG and DETRE (1976):

Psychotic Reactions Associated with Childbirth

Disease of the Nervous System 37: 229

I.C.D. 9 (1981):

Medical Disorders: Glossary and guide to their Classification in accordance with the Ninth revision of the International Classification of disease. W.H.O. Geneva 1978.

JACOBS, B. (1942):

Aetiological factors and Reaction types in Psychoses Following childbirth

Journal of Mental Science 89:242.

JANSSON, B. (1964):

Psychiatric Influences Associated with Childbearing.

Acta Psychiat. Scand. Suppl. 172.

KARACAN, I. and WILLIAMS, R. (1970):

Psychiatry in Medicine 1: 307.

KARNOSH, L. and HOPE, J. (1937):

Puerperal Psychoses and their sequelae

Am. J. Psychiat. 94: 937.

KATONA, C.L.E., (1982):

Puerperal Mental Illness: Comparison with non-puerperal Controls.

Brit. J. Psychiat. 141: 447

KENDELL, R.E., RENNIED, D., CLARKE, J.A., DEAN, C. (1981):

The Social and Obstetric Correlates of Psychiatric Admission in the Puerperium.

Psychological Medicine. 11: 341.

KUMAR, R., and ROBSON, K.M. (1984):

A Prospective Study of Emotional Disorders in Childbearing women.

Brit. J. Psychiat. 144: 35.

LAWSON, J.B., and STEWART, B.D. (1970):

Obstetrics and Gynaecology in the Tropics and Developing Countries.

Edward Arnold, London/Colchester.

MADDEN, J.J., LUHAN, J.A., BIMMERLE, J.F. (1958):

Characteristics of Postpartum Mental Illness.

Am J. Psychiat. 115: 18

MARTIN, M. (1958):

Puerperal Mental Illness: A follow up Study of 75 cases.

British Medical Journal ii: 773

MARCE (1858):

Cited in "A controlled Study of Postpartum Mental Illness

J. Ment. Sci. 106: 214

By Seager (1960)

McNAIR, F.E. (1952):

Psychoses Occuring Postpartum

Canad. Med. Ass. J. 67: 637

MELTZER, E.S. and KUMAR, R. (1985):

Puerperal Mental Illness, Clinical Features and

Classification: A study of 142 Mother and Baby Admissions.

MICROSTAT:

An Interactive General Purpose Statistical Computer

Package.

Release 4.0. Copyright 1984,

PAFFENBARGER, R.S. (1964):

Epidemiological Aspects of Postpartum Mental

Illness.

Brit. J. Prev. Soc. Med. 18: 189

PAYKEL, E.S., EMMS, E.M., FLETCHER, J. and RASSABY, E.S.(1980)

Life Events and Social Support in Puerperal Depression

Brit. J. Psychiat. 136: 339

PAUL, O.A. (1974):

A study of Puerperal Psychoses

Journal of the Indian Med. Ass. 63:84

PICKER, P. (1938):

Psychoses Complicating Childbearing

Am. J. Obs. Gyn. 35: 901

PITT, B. (1968):

Atypical Depression Following Childbirth

Brit. J. Psychiat. 114: 1325

PITT, B. (1973):

Maternity Blues

Brit. J. Psychiat. 122: 43

PITT, B. (1975):

Psychiatric Illness Following Childbirth

Brit. J. Psychait. Special No. 9: 409.

PROTHEROE, C. (1969):

Puerperal Psychosis - A Long Term Study (1927 - 1961)

Brit. J. Psychait. 136:339

PUGH, T.F., JERATH, B.K., SCHMIDT, W.M., REED, R.B. (1963):

Rates of Mental Disease Related to Childbearing

New. Eng. J. Med. 268: 1224.

SEAGER, C,P. (1960):

A Controlled Study of Postpartum Mental Illness.

Journal of Mental Science 106:2 4.

SKOTTOWE, I. (1942):

Mental Disorders of Pregnancy and the puerperium

Practitioner 148: 157.

SOLOMONS, B. (1931):

Postpartum Psychoses

J. Ment. Sci. 77: 701.

STENGEL, E. ZEITLYN, B.B., RAINER, E.H. (1952):

Post-operative Psychoses.

J. Ment. Sci. 104: 389.

STRECKER, E.A. and EBAUGH, F.G. (1926):

Psychoses Occuring During the Puerperium

Arch. Neurol. Psychait. 15: 239.

SWIFT, C.R. (1972):

Psychoses During the Puerperium among Tanzanians.

East African Medical Journal 49:651.

TETLOW, C. (1955):

Psychoses of Childbearing

J. Ment. Sci. 101: 629.

THOMAS, C.L. and GORDON, J.E. (1959):

Psychosis after Childbirth

Am.J. Med. Sc. 238: 363.

TOD, E.D.M. (1964):

Puerperal Depression: A Prospective Epidemiological

Study.

Lancet ii: 1264.

THUWE, T. (1974):

Genetic Factors in Puerperal Psychosis.

Brit. J. Psychait. 125: 378.

TYLDEN, E. (1950):

British Medical Journal ii: 276.

VISLIE, H. (1956):

Puerperal Mental Disorders.

Acta. Psychiat. Neurol. Scand. Suppl. 111

WRATE, R.M., ROONEY, A.C. THOMAS, P.F. and COX, J.L. (1985):

Postnatal Depression and Child Development. A

Three Year Follow-up Study.

WHITE, M.A. PROUT, C.T., FIXSENC. FOUNDER, M. (1957):

"Obstetricians role in Postpartum Mental Illness"

J. Am. Ass. 165: 138.

ZILBORG, G. (1929):

The Dynamics of Schizophrenic Reactions Related

to Pregnancy and Childbirth.

Am. J. Psychiatry 8:732.

APPENDIX

STANDARDIZED PSYCHIATRIC INTERVIEW

PATIENT'S NAME ---------- No.---------

1. BRIEF SUMMARY OF COMPLAINTS AND DURATION

2. FAMILY PSYCHIATRIC HISTORY

3. BRIEF PERSONAL HISTORY

4. SUMMARY AND FORMULATION

5. ASSESSMENT OF RELIABILITY OF INFORMATION

   (1) GOOD (2) FAIR (3) POOR

6. I C D - DIAGNOSIS PRINCIPAL ----------

   ANCILLIARY ----------

   I C D 9 ----------

7. OVERALL SEVERITY PATING 0123

   REMARKS

MANDATORY QUESTIONS ON S P I - SYMPTOMS

1. SOMATIC SYMPTOMS

(i) Have you noticed anything else wrong with your health apart from the things that you have already told me.

(ii) In the past week, have you been troubled with headache or indigestion? Anything else.

2. FATIGUE

(i) Have you noticed that you get tired easily?

(ii) Or that you seem to be lacking in energy?

3. SLEEP DISTURBANCE

(i) What about your sleep?

(ii) Have you lost sleep in the last week?

(iii) Do you have difficulty dropping off?

(iv) Are you restless at night?

4. IRRITABILITY

(i) Do you find that you are easily upset or irritable with

those around you?

(ii) Do you lose your temper or get angry easily?

5. LACK OF CONCENTRATION

(i) Do you find it difficult to concentrate?

(ii) Do you get muddled or forgetful?

6. DEPRESSION/UNHAPPINESS

(i) How have you been feeling in your spirits in the past week?

(ii) Have you at times felt sad?
Unhappy or miserable.

7. WORRY/anxiety

(i) Do you find that you get anxious or frigtened for no obvious reason?

(ii) Do you worry a lot on trivial matters?

8. PHOBIAS

(i) Are you scared or frightened of certain things or situations for no good reason?

(ii) When?

(iii) Where?

9. DISORDERED LIBIDO

(i) Do you find any change in your sexual performance?

(ii) Have you lost interest in marital relationships?

10. BEWITCHMENT

(i) Do you think that bewitchment, spirits or witchcraft are responsible for your present condition or sickness.

(ii) How?

APPENDIX

THE QUESTIONNNAIRE

1. General and Demographic Data

Name ..... Age ..... Ad. No..... Hospital .....

Date of Delivery .....Place of Delivery .....Date of Admission.....

Date of onset of Symptoms .....Date of Discharge .....

2. Obstetric Data

Parity .....Labour (Normal/Prolonged), Type of delivery: (SVD/ Instrumental/Operative);

Antenatal Care: (Yes/No), Traditional Medicine:

(Yes/No) Puerperal Sepsis: (Yes/No), Anaemia: (Yes/No)

Pre-eclampsia: (Yes/No), other illness (Yes/No)

Severe maternity blue: (Yes/No)

3. Genetic Data

Family history of mental illness (Yes/No)

4. Socioeconomic Data

Marital Status: M/S/D/M

Income: L/Me/H

Education: P/Se/PS

5. Psychological Stress Factors

Unhappy marriage: (Yes/No); Unwanted pregnancy: (Yes/No).

Premarital pregnancy (Yes/No).

Still birth (Yes/No).

Neonatal death: (Yes/No)

Mother: (Alive/Dead) Recent stressful event (Yes/No)

Unprepared for motherhood: (Yes/No)

Aversive attitude to child: (Yes/No)

Aversive attitude to husband: (Yes/No)

6. Predisposing Personality Factors

Schizoid (Yes/No)

Anxiety prone (Yes/No)

Extraverted (Yes/No)

Childhood neurotic traits (Yes/No)

Definitions used in the Questionnaire

M = Married, S = Single, D = Divored,

W = Widowed, P = Primary Education

Se = Secondary Education, PS = Post Secondary Education,

L = Low Income,

Me = Medium Income, H = High Income

Low income = 0 - 1,000 K. SH. per month

Medium income = 1,000 - 5,000 K. SH. per month

High income = Above 5,00 K. SH. per month

Extraverted = Many friends, mood swings big good company,

outside interests.

Schizoid = Shy, reserved, isolated with very few or no friends

Anxiety prone = Afraid of meeting people, worrier, fearful

Obsessional = Meticulous, houseproud, conscientious, rigid.