

**PSYCHIATRIC MORBIDITY AMONG CHILDREN
IN UNDUGU SOCIETY OF KENYA HOMES**

**A DESCRIPTIVE STUDY OF PSYCHIATRIC MORBIDITY
AMONG CHILDREN ENROLED IN VARIOUS PROGRAMMES
BY UNDUGU SOCIETY OF KENYA**

**A DISSERTATION SUBMITTED IN PART-FULFILMENT FOR THE DEGREE
OF MASTER OF MEDICINE IN PSYCHIATRY
UNIVERSITY OF NAIROBI**

BY

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JULY, 1996**

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DEDICATION

To my husband, *Dr. Geoffrey Magada* and our daughter *Grace*.


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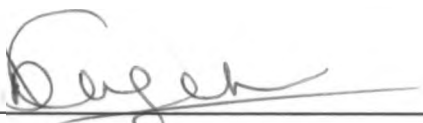
DECLARATION

I certify that this is my original work and has not been presented for a degree in any other University.

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LIST OF ABBREVIATIONS

1. P.M. - Psychiatric Morbidity
2. N.P.M. - Non-psychiatric Morbidity
3. R.Q.C. - Reporting Questionnaire for Children
4. F.I.C. - Follow-up Interview for Children
5. DSM IV - Diagnostic and Statistical Manual IV

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SYNOPSIS

The study was carried out among children in difficult circumstances who were going through a rehabilitation programme in various institutional homes by the Undugu Society - a Non-governmental Organization in Kenya (dealing mainly with rehabilitation of street children). Seventy eight children from the three centres; Eastleigh, Dandora and Kitengela were included in the study. The main objective of this study was to establish the prevalence and pattern of psychiatric morbidity and some of the associated social demographic characteristics in such children. Screening for psychiatric morbidity was done using the Reporting Questionnaire for Children (RQC) and the potential cases were further subjected to a standard psychiatric interview, Follow-up Interview for Children (F.I.C.). History of drug abuse and other social demographic data were also obtained.

Results showed a psychiatric morbidity of 41%. The Dandora home, consisting of children with a relatively shorter time from the streets, had the highest rate of psychiatric morbidity.

History of drug abuse was reported by 46.2%, while only 3.8% were diagnosed as having drug dependence. Most social demographic factors studied did not appear to contribute significantly to the psychiatric morbidity and this was possibly due to the heavy loading of psychostressors common to the majority of the children.

BACKGROUND

Kenya, like many other developing countries in Africa, is undergoing many economic, and social cultural changes among which is an extraordinary high urban growth rate (about 8%). Fertility rates are at present quite high (at 6-8 children per an average family, both in towns and in the rural areas). Within the urban areas there is pressure on land and many families cannot afford to live in environmentally safe dwellings. Hence many families have been forced into the slums whose over-population has been enhanced by rural-urban migration. Provision of piped water, sanitation and removal of household waste is inadequate creating an environment which is not conducive to either the physical or mental development of children.

In addition slum houses are invariably small in size some being single rooms inhabited by several people who use the room for living, cooking, eating and sleeping. There is no privacy or space for relaxation in the homes and there is also lack of recreational facilities. All these taken together with other effects of poverty like lack of food and access to ordinary social amenities, are thought to contribute as causes of the street child phenomenon.

Other situations contributing to this phenomenon include teenage pregnancies, extramarital relationships, irresponsible sexual behaviour, pregnancies arising from rape or sexual abuse in a domestic setting-child abuse (particularly of a girl), domestic violence, family breakdown, large families and children of street parents. Once in the street the children are exposed to a large number of health hazards because of their lifestyles. Some of these are malnutrition, poor health, violence, sex abuse and substance abuse. There is also insecurity and emotional deprivation. Many street children both boys and girls are frequently abused. They are beaten and ill-treated on the streets and in the remand homes. They are exposed to rape by older street dwellers or adults in the remand prisons, a situation that could easily result in having Sexually Transmitted Diseases (STDs) or Acquired Immune Deficiency Syndrome (AIDS).

According to a report of a baseline survey on street children in Nairobi by Child Welfare Society of Kenya, carried out during the months of August and September 1993, the key factors and processes which have contributed to the existence and proliferation of street children are listed and include global economic recession, deterioration of the overall economic situation in the country, high unemployment rate and rising cost of living. Also cited is the AIDS pandemic which has worsened the situation by increasing the number of orphans. Other factors include:- unfavourable conditions of structural adjustment programmes, increased differential access to resources and opportunities between individuals and groups, political dislocations and drastic changes in family structures and relations. The street life subculture which has arisen as a result, dooms children to live and work under distressed, deprived and difficult circumstances.

The problem of street children began in the early 1950's when the colonial system broke up families by imprisoning men and women or taking them away to concentration camps. Children were left helpless, wandering off to the streets with the hope of finding some means of survival. These children were then known as parking boys and girls. These children helped motorists by directing cars into parking bays, sometimes offering to clean the cars for a small fee. Later their mode of operation changed and they became more assertive in trying to attain means for survival which included begging, stealing, scavenging, prostitution and other disreputable activities. Some of these children do honest work for hawkers, traders and others. The number of street children has been growing rapidly and according to the Ministry of Home Affairs and National Heritage the 1989 figures were as follows:-

Nairobi	3,600
National figures	16,300

The juvenile courts, children remand homes and approved schools felt the pinch as they received children in greater numbers but

could not adequately reduce the escalating numbers. By 1991 it was estimated that 300,000 children were on the Nairobi streets (with no proper housing, food, clothing).

PROJECTIONS OF STREET CHILDREN POPULATIONS

Philista Onyango, Katete et al in a report on a study of street children in Kenya submitted to the Attorney General by the African Network for Prevention and Protection against Child Abuse and Neglect (ANPPCAN), have indicated that the existing estimates of the population of street children in Kenya have underestimated the problem.

They defined the population of street children based on two broad categories - actual and potential street children. The latter group forms the majority and it consists of children of school age (6 - 18 years) not attending any school.

Average enrolment of school age children is estimated at 80% and the dropout rate at 40%. They used the given estimated annual total population growth of 4.1% and school drop out rates and these gave an average growth rate of the street children population of about 10% per annum (figures were based on Ministry of Education statistics unit).

The projections made of the street children population in Kenya came to **about seven million** with 10% estimated delinquent children by the year 2000. Such figures leave no doubt as to the significance of the problem and the need for appropriate measures by health planners.

CHILDREN IN AFRICAN SOCIETY - A PHILOSOPHICAL BACKGROUND

The position of children in African society rested not just on the economic or psychological needs of a family, rather it formed an integral part of the scheme of interdependence of the extended family and the clan and of the world view and religious practices of the ethnic group as a whole - Mbiti 1992.

Under the customary law the children were actually in the custody of an extended family unit, so that illness or death of the parents simply entailed a relative taking over responsibility for the child.

J.S. Mbiti in his book, African Religions and Philosophy points out that procreation in African communities is a religious obligation by means of which the individual contributes the seeds of life towards man's struggle against the loss of original immortality. Biologically both husband and wife are reproduced in their children, thus perpetuating the chain of humanity. Procreation and child raising is therefore important in the traditional African society whereby the inevitability of death is accommodated by laying emphasis on the renewal process. Children also helped to support daily life through collaboration with adults in providing labour for managing the economic system. Together, the renewal function and the economic contribution, made the **child to be cherished and esteemed.**

The advent of modernisation dating back to the beginning of colonisation in the last quarter of the 19th century has brought competition to the African social practices. However, the position of the child in African society today has not completely changed even though certain changes are to be expected due to the realities of modern life. Efforts at strengthening African social practices in favour of the child are needed in order to minimize the plight of **our children.**

CHILD ABUSE AND NEGLECT

Looking at the problem of street children from a wide perspective, one cannot fail to appreciate that it is a manifestation of child abuse and neglect. The child's rights to education, survival, development, health and protection are being grossly violated. This is a type of child abuse by society as a whole in collaboration with its individual components - the family, the education, economic, political and religious systems. The many studies carried out so far on child abuse seem to

concentrate more on the physical aspects. Nduati et al 1992 did a study on sexual abuse of children at Kenyatta National Hospital (KNH) and concluded that this is common in Kenya. However, it is not easy to tell to what extent the street children have suffered this abuse. The **Battered Baby Syndrome** is also well recognised as a form of abuse to children.

Emotional abuse - many children's emotional and other psychological needs are not adequately met in their families. How severe the family's failure to meet its children's needs must be to justify use of the term "emotional abuse" is an arbitrary judgement although extreme cases are easily identified. The term could be applied to many cases with psychiatric disorders. Many jurisdictions in the Western world have enacted laws defining emotional abuse. The aim is to have a legal basis for intervention in cases in which there is no obvious physical abuse or neglect but there is gross failure to meet children's psychological needs.

Garbarino et al (1986) use the term '**psychologically battered child**'. They define five forms of physically destructive behaviour:-

1. Rejecting - the adult refuse to acknowledge the child's worth and the legitimacy of the child's needs.
2. Isolating - the child is cut by adult from normal social experiences, prevented from forming friendships and made to believe he or she is alone in the world.
3. Terrorizing - the child is verbally assaulted by the adult who creates a climate of fear, bullies and frightens the child to believe that the world is capricious and hostile.
4. Ignoring - the adult deprives the child of needed stimulation and fails to respond in suitable ways, stifling emotional growth and intellectual development.
5. Corrupting - the child is missocialized, being stimulated to engage in destructive antisocial behaviour and reinforced in such deviant behaviour.

Garbarino et al (1986) provide examples of how each of the above types of behaviour by adults may affect children at different stages of development. In extreme cases the syndrome of "**non-organic failure to thrive**" (Bullard et al 1967) may result. "**Deprivation dwarfism**" is another term that has been used for growth failure related to adverse rearing experiences. In most instances, however, the child's growth and physical condition are within limits but there are problems of psychological development and adjustment.

These may be poor self esteem, unresolved anger or almost any psychiatric syndromes. Conduct disorders, chronic anxiety and academic failure are common consequences and as the children grow older some come to meet the criterion for personality disorders.

Covitz (1986) refers to emotional child abuse as "**the family curse**" handed down from generation to generation. He points out that it is what the parents are and do, rather than what they tell their children that is important. He describes three abusive types of parenting, labelling them as:-

- (a) the inadequate parent
- (b) the devouring parent and
- (c) the tyrannical parent; these bring the intergenerational cycle of emotional abuse. Many children's behavioural, emotional or physical symptoms may be seen as danger signals - signs that their needs are not being met.

The street child is in a vulnerable position and may have fallen victim of any form of abuse - physical, emotional and in most cases both. The endorsement of the Convention on the Rights of the Child in September 1990 by heads of states and governments in New York during the first world summit for children was timely. The summit also adopted the Declaration for Implementation of Global Goals for the Survival, Protection and Development of Children. It was agreed that state parties should develop national plans of action to implement these goals in every country.

The child psychiatrist should be well equipped with the relevant knowledge in order to help the street children. Their management however should be a multidisciplinary team work involving paediatricians, social workers, legal advisers and psychologists.

LITERATURE REVIEW

Behavioural and emotional disorders occur frequently in the general population of children. Estimates vary according to the diagnostic criteria and other methods used but it appears that rates in the developed and developing countries are similar Rutter et al 1974.

In Britain the prevalence of child psychiatric disorder in ethnic minority groups has usually been found to be similar to that in the rest of the population. The exception is a high prevalence of conduct disorder found among West Indian girls (Rutter et al 1974). The frequency of psychiatric morbidity varies with age. Richman et al (1982)² reported that 7% of three year olds had symptoms amounting to a moderate or a severe problem and a further 5% had mild problems such as disobedience. In the middle years of childhood rates of psychiatric morbidity vary in different kinds of areas being twice as high in urban areas (about 25%) than in rural areas (about 12%) (Rutter et al 1975).

Evidence about mid-adolescence was provided by a four year follow-up of Isle of Wight study (Rutter et al 1976). At the age of 14, the one year prevalence rate of significant psychiatric disorder was about 20%. The most detailed findings come from a study of physical health, intelligence, education and psychological difficulties in all the 10 and 11 year olds attending state schools in the Isle of Wight - a total of 2199 children (Rutter et al 1970). Screening questionnaires were completed by parents and teachers. Children identified in this way were given psychological and education tests and their parents were interviewed. The one year prevalence rate of psychiatric morbidity was about 7%. The rate in the boys was noted to be higher than in girls. There was no correlation with social class, but prevalence increased as intelligence decreased

and psychiatric morbidity was clearly associated with mental handicap. There was also a strong association between reading retardation and conduct disorder. Several years later the same methods were used to survey an inner London borough (Rutter et al 1975 b,c). It was found that the rates of all types of psychiatric disorders were twice those in the Isle of Wight (NB - The Isle of Wight is an area of small towns and rural areas off the mainland England). A study in an Australian town of about 2000 inhabitants suggested prevalence rates of 10% in children and 16% in adolescents (Krupinski et al 1967). The Ontario child health study yielded data on the prevalence of psychiatric disorders in children aged 4 to 16 years in the Canadian province of Ontario (Boyle et al 1987, Offord et al 1987). A total of 3294 children aged 4 - 16 years were studied. The percentage prevalence rates that were found were considerably higher than those in the Isle of Wight. The data confirmed that there are marked sex differences in the prevalence of many child psychiatric disorders. It also highlighted the differential changes in the prevalence rates with age. In the younger age group emotional disorders are about equally prevalent in the two sexes but in the older group they are nearly three times more common in girls. On the other hand conduct disorders are in both age groups much commoner in the boys than girls. Standley (1962), Gillies et al (1968) reported significant correlation between social economic status and psychiatric morbidity, psychiatric morbidity being more frequent and severer in the lower social economic groups. Giel et al (1981) reported increased childhood psychiatric disorders among the social and economically deprived in Colombia and Phillipines.

DEVELOPING COUNTRIES

More and more of the studies to determine psychiatric morbidity indicate that mental disorders in the developing world are as prevalent as they are elsewhere. Giel et al (1960) in Ethiopia studied psychiatric morbidity in two Ethiopian villages, revealing prevalence rates of three to four percent in children under nine years, and six to ten percent in those ten years and older.

In the Sudan, Cederbald and Baasher (1968) focused their attention on some specific symptoms in 1,716 children aged three to fifteen years who lived in a Sudanese village with respect to stuttering, sleep walking, enuresis, encopresis and sleep disturbances. Children showing more than one of the above symptoms and a Swedish control group were studied in more details. These authors found the Sudanese children to have a generally lower rate of severe symptoms than those of the Swedish sample (8% vs 25%). The Sudanese, however showed a higher incidence of aggression and nocturnal enuresis than their Swedish controls.

A study done by W.H.O in four developing countries namely, Columbia, India, Phillipines and Sudan, in order to ascertain the prevalence of psychiatric disorders among children attending primary care facilities (Giel et al 1981) showed that childhood psychiatric morbidity was high among children attending the primary health care facilities. Rates of between 10% and 29% were found.

According to the same study, associated psychosocial factors were found to be significant in determining psychiatric morbidity. Social or material deprivation and experiential deprivation were reported most frequently in Colombia while family problems were cited more in the Phillipines.

Another notable finding in the study was that primary health care workers did not diagnose 80 - 90% of childhood psychiatric morbidity, a finding which is of considerable significance both to the effective functioning of primary health care for children and more specifically to the provision of child mental health care. The recommendations made by W.H.O. expert committee (1977) on child mental health are still very relevant today. The committee recommended that in developing countries:-

- (a) Attention should be paid to preventive aspects of childhood psychiatric disorders.
- (b) Mental health services for children should emphasize the use of Primary Health Workers already providing population coverage and of volunteer workers.

KENYA

In Kenya more and more studies are being done in the area of child psychiatry.

Wakube (1983) studied the pattern of childhood psychiatric disorders at KNH clinic. A total of seventy one (71) children (38 boys, 33 girls aged between four to fifteen years were seen during a study period of 4 months. The diagnoses were:-

Neurotic disorder	40%
Conduct disorder	21%
Developmental delays	16%
Others	14%

Mwita (1985) studied the pattern of childhood psychiatric morbidity at Mathari Hospital (one hundred and ten children 71 boys, 39 girls) aged between six to fifteen years were admitted to the children psychiatric ward during the eighteen month period of the study. All of them were systematically assessed by a multidisciplinary team consisting of child psychiatrist, paediatrician, psychologist, social workers, nurses and diagnoses were made using standardized criteria. The diagnoses were:-

Affective disorder	21%
Organic brain disorder	20%
Mental handicap	18%
Conduct disorder	4%
Epilepsy	13%
Schizophrenia	5.5%
Epilepsy	5.5%

Kang'ethe R.N. (1988) did a study in a primary health care facility in a sub-urban township within Nairobi. A total of 303 children 164 boys and 139 girls aged between 5 and 15 years were examined.

20% of these children were found to have clinically significant and definable psychiatric disorder.

The diagnoses were:

Neurotic disorders 77%

Conduct disorders 13%

Conduct disorders were considerably commoner in boys Male:Female (M:F) ratio 5:1, whereas the neurotic disorders were slightly commoner in girls M:F ratio 0.9:1. 74% of the neurotic children and 25% of those with conduct disorders presented with somatic symptoms.

In the psychosocial characteristics of the study population Kang'ethe (1988) found that 11% of the boys, 23% of the girls with psychiatric morbidity belonged to one parent families. The young parent was almost always the mother and the children were less than 7 years old. All the patients in the sample were from a low social economic background.

Gatangi A.S.M. (1987) did a study on Psychiatric Morbidity in Children and Young Persons admitted into an approved school in Nairobi. A total of 85 boys were studied and 24.8% of them had psychiatric morbidity. 11.8% were diagnosed to have neurotic depression while 4.7% had anxiety neurosis. Demographic statistics on children in Kenya (based on the 1979 projections by the Central Bureau of Statistics) show that 52% of the projected Kenyan total population of 37,000,000 will be children. Kenya is a youthful country and these condition may remain true for some decades.

RATIONALE

While a lot is being done by governments and NGOs to alleviate the problem of child abuse and neglect, not much specific research has been done regarding the mental health of these disadvantaged children.

Studies so far done among children and adolescents have concentrated on hospital clinics and community based epidemiological studies neither of which is representative of the children targeted by this study, who are special in that they are loaded with many psychosocial stressors. This study intends to fill this gap.

HYPOTHESIS

There is substantial psychiatric morbidity among children undergoing rehabilitation in the various community homes of Undugu society of Kenya.

AIMS AND OBJECTIVES

1. To study the prevalence and pattern of psychiatric disorders among children who are disadvantaged and are in institutions.
2. To make recommendations regarding measures for the improvement of their mental health.

STUDY AREA AND STUDY POPULATION

The study was carried out among children under a supportive programme by Undugu society of Kenya. There are two community homes located in Eastleigh and one in Dandora in Nairobi each of which has a capacity of about 20 - 30 male children. The girls are in a separate home located in Kitengela (Kajiado district) with a capacity of 60 children.

All the children had been taken from the streets by social workers who identified the most needy among them for institutionalisation. Those children who could be re-integrated within the community or with their nuclear families were assisted to do so. Some of the children join Undugu not from the streets

but as desperate cases who seek assistance after parental loss or other pressing needs.

Once in the institutions they are given opportunity to attend either formal or informal schools. Screening for appropriate placement is done at a reception centre at Dandora where street children are given temporary shelter and food. The children's age ranges from five to eighteen years, the majority of them being over ten years old.

UNDUGU SOCIETY OF KENYA

This is an Non-Governmental Organisation (NGO) which was started in 1973 and has its offices in Nairobi. It is one of the many organisations running supportive and/or preventive programmes for 3000,000 actual and potential street children through provision of fostering, rehabilitation and training services. The supportive programmes are institution based while preventive ones are family (community) based.

In its present form Undugu has sub-programmes with a capacity for 1,000 children. There are 137 staff in the programme among them 20 Kenya Institute Administration (KIA)/University trained social workers. These are spread out and work in five different areas, four of which are in Nairobi namely Kibera, Pumwani, Mathari, Eastleigh and Kariobangi. The fifth area is located outside Nairobi in Katangi.

Undugu assists former street children to join formal schools but has its own Undugu Basic Education Programme (UBEP) which serves those children who on account of age and other impediments cannot be absorbed with the regular formal educational systems. The UBEP has been approved by the Kenyan Institute of Education (K.I.E.) and is organized into three phases. Currently, there are four community based UBEP schools located in the slum areas of Ngomongo, Mathari, Pumwani and Kibera catering for more than 600 children. The drop out rate in UBEP is low and more than 90% of those enrolled complete the course. Graduates of UBEP and regular school drop outs are provided with vocational training

based on closely supervised apprenticeship with local artisans. The artisans are compensated in kind through upgrading of their skills at the programmes production units. The graduates of the vocational training find employment in public and private sectors or enter into self-employment.

The total annual programme budget is estimated at about Ksh.30 million, 30% of which is generated from the sale of commodities (goods and services) of its production units and the remainder is solicited from donor sources.

The preventive sub-programme aims at integrated slum development and its range of activity covers the youth, community primary health care, urban, agriculture, dry land, agriculture and small enterprises advisory roles. The sub-programme absorbs about 90% of their total programme budget.

METHODOLOGY

1. Authority to conduct research was obtained from the Office of President.
2. Permission was solicited from the In-charge of the Undugu Society Head Office, and also from the various heads of the Undugu homes.
3. Caregivers in the community homes were requested to sign informed consent forms for the children (the caregivers are the members of staff who take care of the children in the homes and they supervise their activities).
4. A socio-demographic questionnaire (appendix 1) was designed and applied by the author; who interviewed the caregiver/housemother and the child as well. A University student trained before hand assisted this researcher in data collection.
5. Screening for psychiatric morbidity was done utilising the reporting questionnaire for children (RQC). The housemother or fellow children close to the index child were interviewed by the author, counterchecking where necessary in order to ensure, accuracy of the information collected.
'Potential cases' i.e., children scoring more than one positive answer were subjected to the second stage of screening.
6. The second stage consisted of a standard psychiatric interview - The follow-up interview for Children (F.I.C.) - Appendix III. Symptoms and diagnoses were recorded according to DSM IV.
7. All children were subjected to a questionnaire designed by the author to assess the extent to which they had experienced drug use/abuse - Appendix IV.

INCLUSION CRITERIA

Children who were 18 years and below and enrolled in supportive programmes by Undugu Society of Kenya.

EXCLUSION CRITERIA

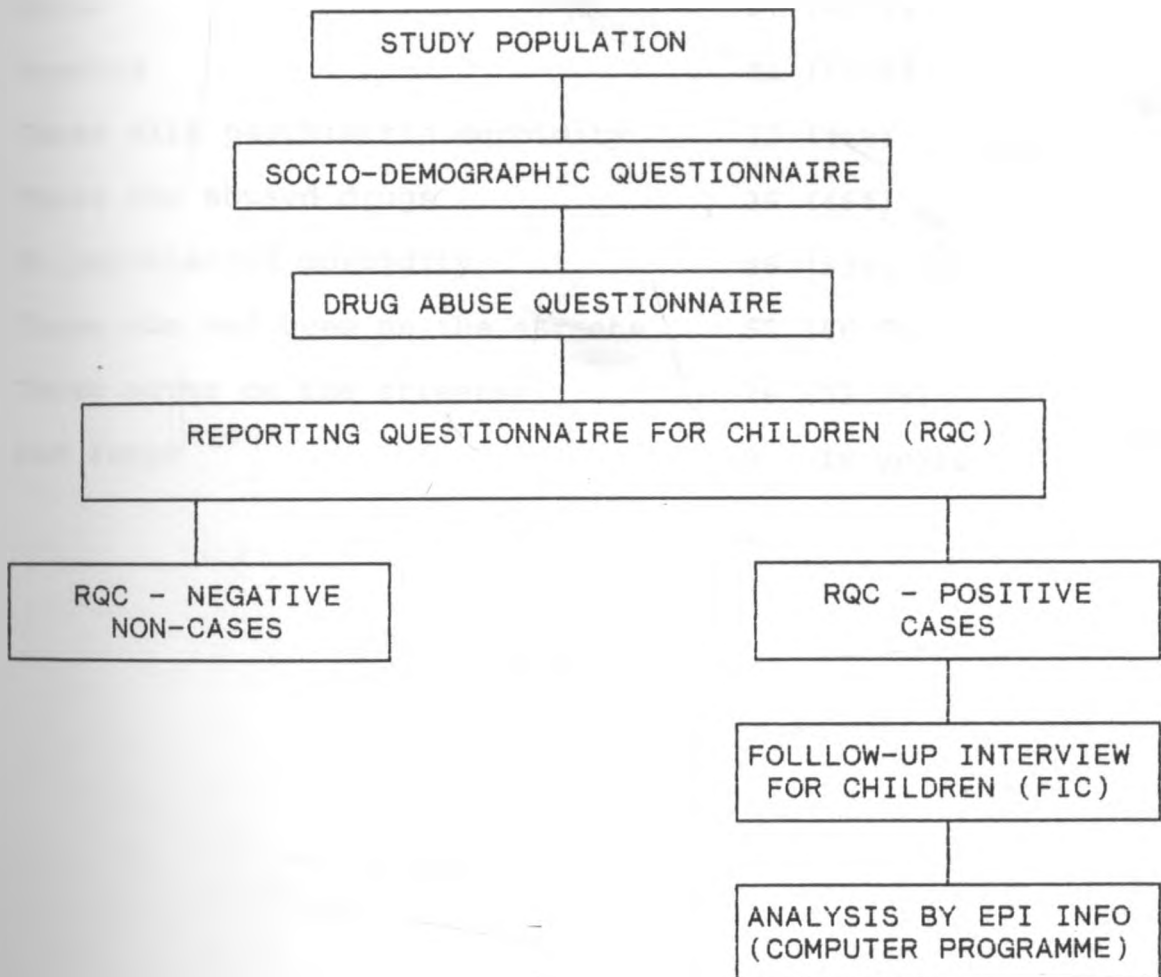
Children who were severely physically ill.

Children not well known to the caregiver on account of having been in the institutions for a limited amount of time (duration taken to be three months or less).

INSTRUMENTS

1. Appendix I - a questionnaire designed by the researcher to obtain socio-demographic data.
2. Appendix II - Reporting Questionnaire for Children (RQC)
3. Appendix III - Follow-up Interview for Children (FIC)
4. Appendix IV - Drug Use/Abuse questionnaire

FLOW CHART FOR THE STUDY



RESULTS

All the results of this study are displayed in tables and bar charts in the following pages. The important interpretations of the data appear as short notes below the respective tables (or bar charts).

Highlights

Total no. of children	78
Males	37 (47.4%)
Females	41 (52.6%)
Those with psychiatric morbidity	32 (41%)
Those who abused drugs	36 (46%)
No psychiatric morbidity	46 (59%)
Those who had been on the streets	52 (66.6%)
Those never on the streets	26 (33.3%)
Age range	8 - 18 years

Psychiatric Morbidity

(Diagnosis made according to the Diagnostic and Statistical manual of Mental Disorders, Fourth Edition (DSM-IV) (American Psychiatric Association).

<u>DSM IV CODE</u>	<u>DIAGNOSIS</u>	<u>Prevalence</u> <u>% of total</u>
307.6	Enuresis (5)	6.4%
300.02	GAD* (9)	11.5%
304.30	Cannabis dependence (3)	3.8%
307.0	Stuttering (2)	2.6%
312.8	Conduct disorder	2.6%
311	Depressive Disorder NOS** (11)	14.1%
317	Mental Retardation (3)	3.8%

Key:

GAD* - Generalised anxiety disorder

NOS** - Not otherwise specified

NB: Some of the children had more than one psychiatric diagnosis.

TABLE 1

Age Versus Psychiatric Morbidity (PM)

<u>Age (years)</u>	<u>Frequency</u>	<u>P.M.</u>
8	2	1
9	4	2
10	7	3
11	5	1
12	7	3
13	9	6
14	10	4
15	11	4
16	15	5
17	5	2
18	3	1
<hr/>		
TOTAL	78	32

Notes:

Mean age = 13.6 years

Mode = 16 years

Point prevalence for psychiatric morbidity was highest among the 13 year olds. In this age group 6 out of 9 (or 66.6%) had P.M. P.M. was lowest amongst the 11 year olds (20%). However, these are trends.

TABLE 2

Sex Versus Psychiatric Morbidity

Sex	No. with PM	No. with no. PM	Total	% of those with PM
male	15	22	37	19.23%
female	17	24	41	21.79%
Total	32	46	78	41%

Notes:

Sex ratio F:M 1:1.11

The above table shows that out of the 78 children included in the study 17 out of 41 females had PM while 15 out of 37 males had PM with percentages of 21.79 and 19.23 respectively.

Chi-square was 0.01

P = 0.882

No statistical difference noted for sex Vs PM.

TABLE 3**Station Versus Psychiatric Morbidity**

Station	No. with PM	No. with no PM	Total	% with PM
Kitengela	17	24	41	21.8%
Dandora	11	6	17	14.1%
Eastleigh	4	16	20	5.1%
TOTAL	32	46	78	41%

Notes:

34.4% of all children with PM came from Dandora home which only had 14% of all the children included in the study.

Chi-square = 7.08

Degrees of freedom = 2

P = 0.029

Therefore significant difference was observed indicating a higher psychiatric morbidity among the children in Dandora. Eastleigh was the station with lowest psychiatric morbidity. Children in Dandora home included those who were more recently rescued from the streets. Some of the children there were not fully decided whether or not to leave the streets. There was higher prevalence of drug abuse as well.

FIG.1: STATION VERSUS PSYCHIATRIC MORBIDITY

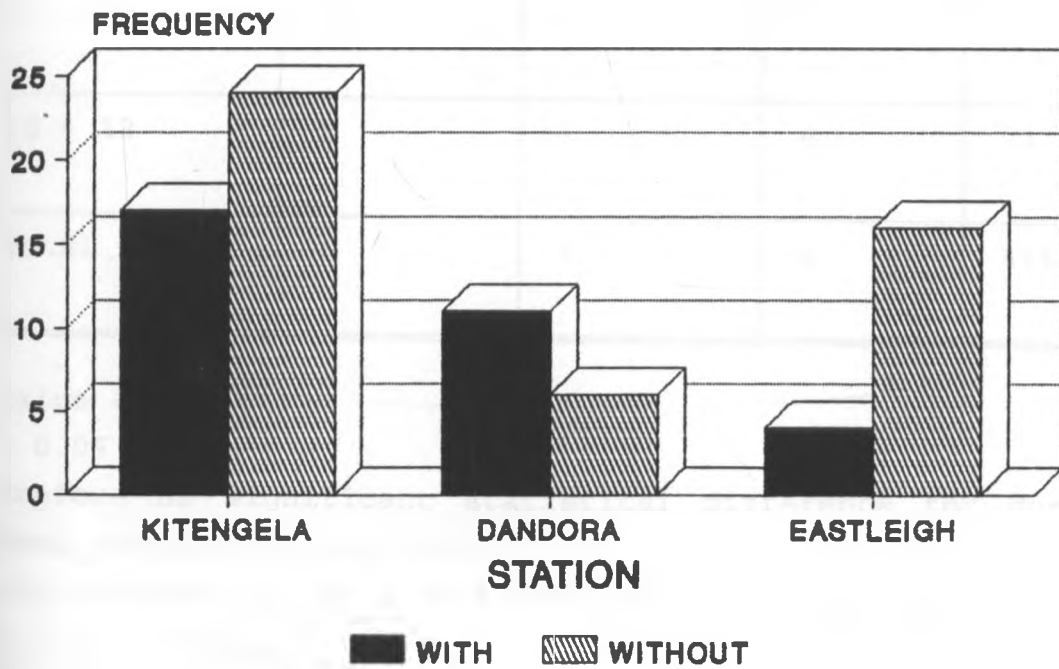


TABLE 4

**psychiatric Morbidity Versus the duration of time the
Child has been at Undugu society**

Age in yrs	No with PM	No without PM	Total	%
1 - 3	18	24	42	23.1%
4 - 6	13	16	29	16.7%
7 - 9	0	3	3	0%
10 - 12	1	3	4	1.3%
Total	1	3	4	41%

P value = 0.602

P > 0.05

Therefore no significant statistical difference for duration versus psychiatric morbidity.

53.8% had been in the institution for less than three years.

91% - upto 6 years

9% - had stayed longer than 6 years

FIG.2: PSYCHIATRIC MORBIDITY VERSUS DURATION OF TIME THE CHILD HAS BEEN AT UNDUGU

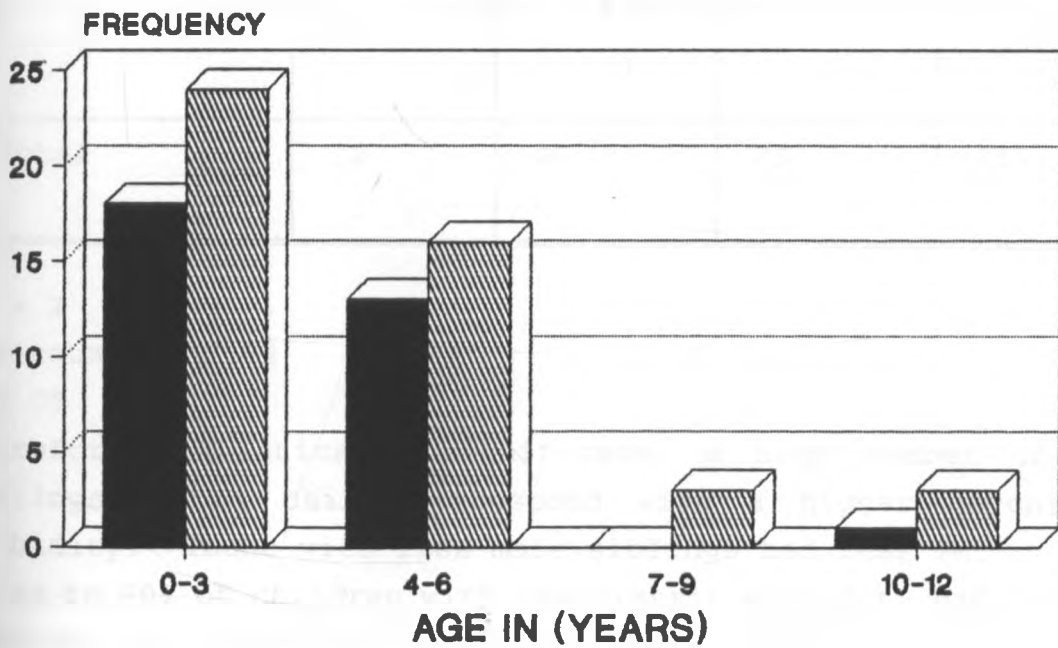


TABLE 5

Number of male siblings Vs psychiatric morbidity

No of male siblings	No with PM	No with no PM	Total	% of total PM
0 - 2	9	28	37	11.5%
3 - 4	19	11	29	24.3%
5 - 6	2	5	6	2.5%
7 - 8	2	2	4	2.5%
Total	32	46	78	41%

DF = 3

Chi-square = 7.82

P<0.05

Therefore statistically significant, a high number of male siblings for a child correspond with a higher psychiatric morbidity. Those with less male siblings had less PM.

Close to 60% of children with psychiatric morbidity had 3-4 male siblings as compared to only 28% among those with fewer male siblings.

FIG. 3: NUMBER OF MALE SIBLINGS VERSUS PSYCHIATRIC MORBIDITY

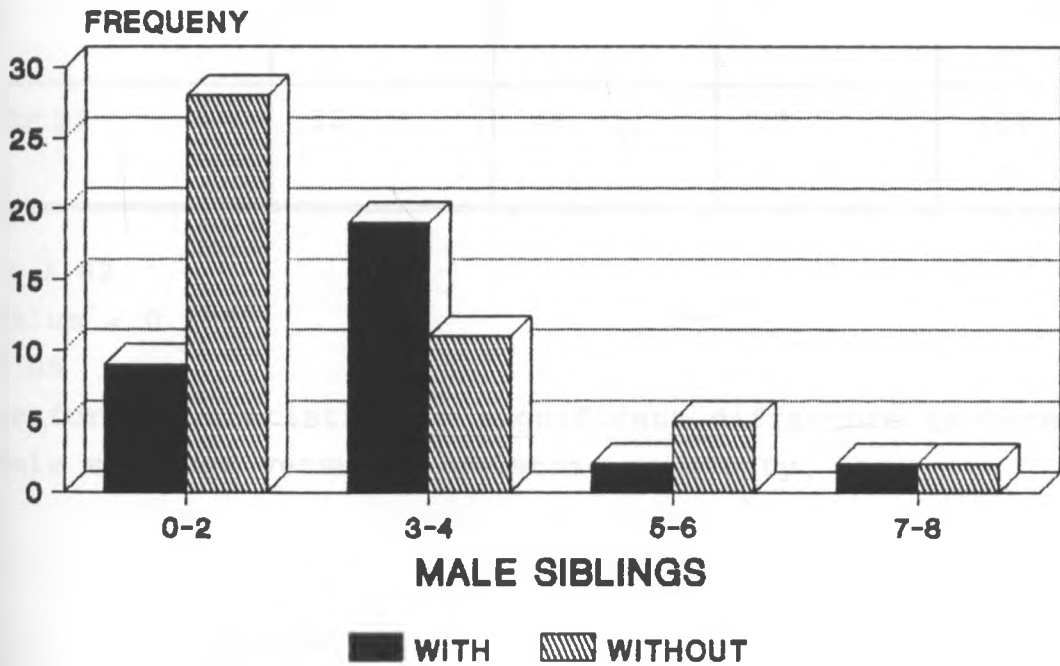


TABLE 6

Number of Female siblings Vs Psychiatric Morbidity

No of female siblings	No with PM	No with no PM	Total	% PM
0 - 2	19	25	44	24.4%
3 - 4	12	18	30	15.4%
5 - 6	1	3	4	1.28%
Total	32	46	78	41%

$X^2 = 3.02$

P value = 0.806

$P > 0.05$

Therefore no statistically significant difference is noted for female siblings versus psychiatric morbidity.

TABLE 7

Birth order among the males versus Psychiatric Morbidity

Birth order among the males	with PM	with no PM	Total	%
1st - 2nd	18	25	43	23.1%
3rd - 4th	8	10	20	10.25%
5th - 6th	4	8	12	5.12%
>7th	2	1	3	2.56%
Total	32	46	78	41%

Notes:

P value = 0.138

P >0.05

Therefore not statistically significant.

There is no significant difference in psychiatric morbidity whether a child is 1st born or 3rd born etc.

For a girl, birth order among males stands for the overall birth order (i.e. birth order among both males and females) for the boy it is for males alone for a male from a family with 5 siblings of 4 older girls. He will be the 1st born male and the same applies for the girls among female siblings.

TABLE 8

Birth order among Female Siblings Vs PM

Birth order among females	No with PM	No with no PM	Total	%
1st - 2nd	14	21	35	17.9
3rd - 4th	7	12	19	8
5th - 6th	5	7	12	6.4
>7th	6	6	12	7.6
Total	32	46	78	41

P>0.05

Not significant

Highest number of siblings given was 10. Most of the children came from families with between 3 - 5 siblings.

TABLE 9

Psychiatric Morbidity Vs Place of birth

Place of birth	with PM	with no PM	Total	%
Urban	20	28	48	25.6
Rural	9	14	23	11.5
Do not know	3	4	7	3.8
Total	32	46	78	41

P value = 0.839

Not significant

Majority of children interviewed were born in urban areas most of which are slums with low income dwellers.

Some children had difficulties knowing where they were born and neither could the house mothers have answers to this particular question.

FIG.4: PSYCHIATRIC MORBIDITY VERSUS PLACE OF BIRTH

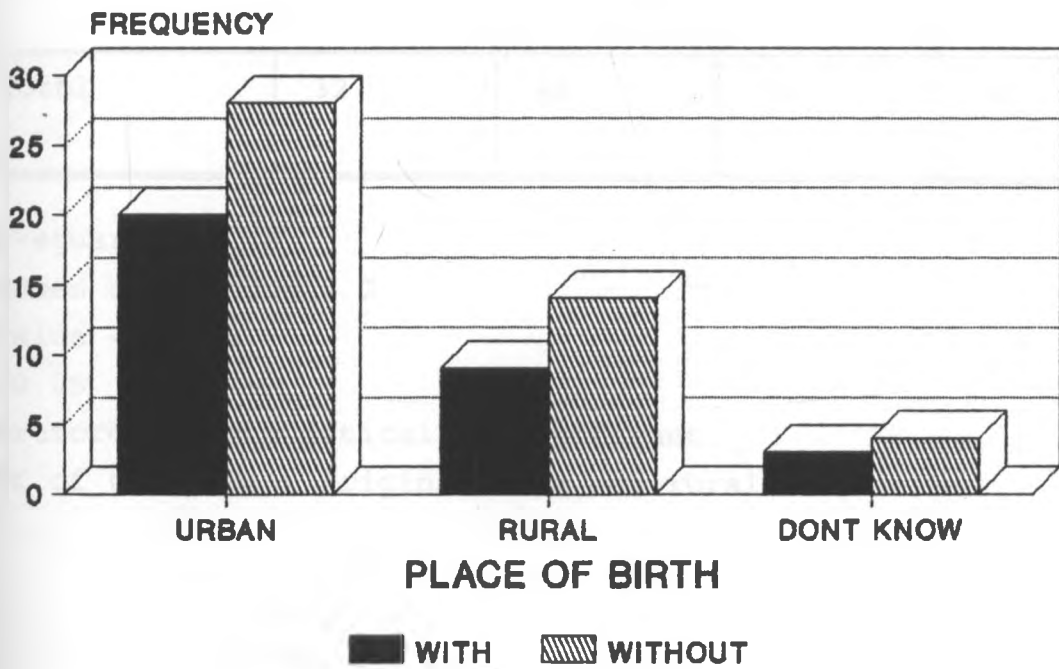


TABLE 10

Original Home of Parents Vs PM

Original home of Parents	No with PM	No with no PM	Total	%
Urban	8	12	20	10.2
Rural	18	28	46	23.0
Do not know	6	6	12	7.6
Total	32	46	78	41

Chi-square = 0.48

Degrees of freedom = 2

P value = 0.788

P > 0.05

Therefore not statistically significant.

Most of the parent original home was rural.

TABLE 11

Knowing A Parent Versus Psychiatric Morbidity

Knowing at least a parent	PM	No PM	Total	%
Yes	31	46	77	39.7
No	1	0	1	1.2
Total	32	46	78	41

Notes:

$X^2 = 1.46$

$P = 0.23$ i.e. >0.05

Therefore not significant

98.7% of all children interviewed knew at least one of the parents. Only one child did not know either the father or the mother.

68.8% knew both parents

Among those who knew only one parent 23.4% knew the mother and 6.5% knew the father only.

TABLE 12

Table showing the frequencies for each category for knowing parents

	<u>Number</u>	<u>%</u>
Know both	78.77	98.7%
Know mother only	18	23.4%
Know father only	5	6.5%
Know one	1	1.3%

Knowing Parents Versus Psychiatric Morbidity

	With PM	No PM	Total	%
Know both	20	33	53	25.7
Know mother only	9	9	18	11.5
Know father only	3	3	6	3.8
Know none	0	1	1	0
Total	32	46	78	41

Degree of Freedom = 3

Chi-square = 1.52

P value = 0.68

Therefore not significant

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TABLE 14

Frequency table showing Who Among the parents was alive

	<u>Frequency</u>	<u>%</u>
Both parents alive	33	42.3%
Only father alive	9	15.5%
Only mother alive	19	24.4%
Both parents dead	16	20.5%
Do not know parents	1	1.3%
TOTAL	78	100%

Notes:

20.5% of all children interviewed were orphans i.e. had no living parents.

42% had both parents alive and 1.28% did not know the parents.

TABLE 15**Marital Status of Parents Vs PM**

Marital Status	With PM	With No PM	Total	%
Married & staying together	8	11	19	24.4%
Separated	13	12	25	32.1%
Divorced	0	1	1	1.28%
Married and living separately	2	11	13	16.6%
Do not know	9	11	20	25.6%
Total	32	46	78	100%

Chi-square = 5.50

DF = 3

P value = 0.1388

Notes:

Only 24.4% of the parents were reported as married and staying together. The rest were either reported as separated or had unclear marital status with 32:1 and 25.6% respectively.

Divorce was reported low at 1.28%.

**FIG.5: MARITAL STATUS OF PARENTS
VERSUS PSYCHIATRIC MORBIDITY**

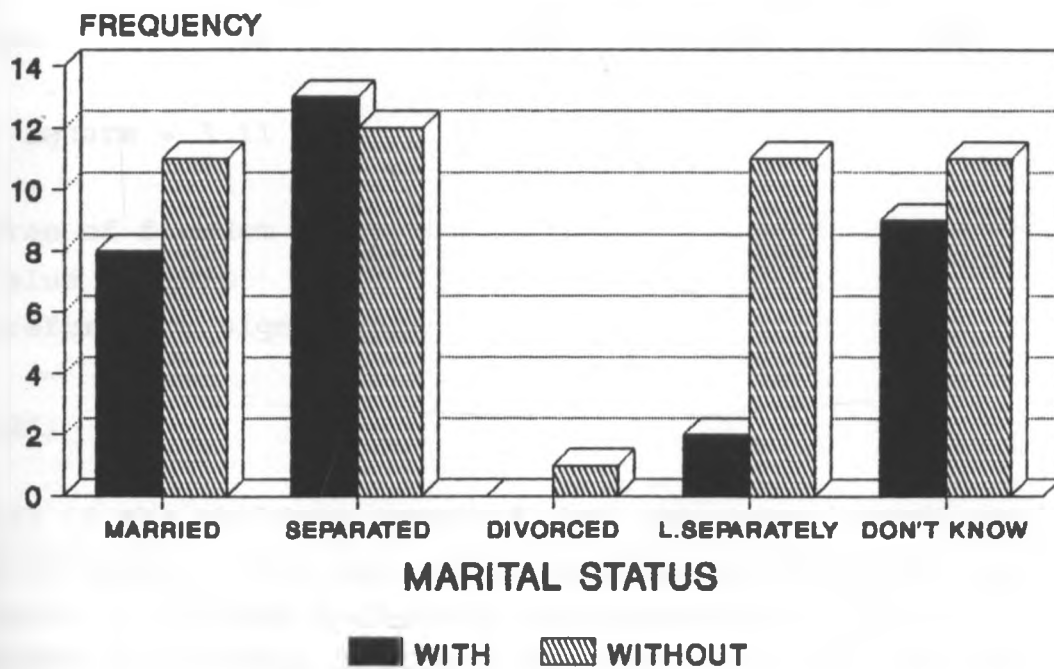


TABLE 16

Who Brought Up the Child Vs PM

WHO	NO WITH PM	NO PM	TOTAL	%
Both parents	9	13	22	28.2%
Mother alone	17	20	37	47.4%
Father alone	1	0	1	1.3%
Relative	5	13	18	23.1%
Total	32	46	78	100%

Chi-square = 3.11

Degree of freedom = 3

P value = 0.374

Therefore not significant

Notes:

47.4% of the children reported that they were brought up by the mother alone. Only one child reported being brought up by the father; 28.2% were brought up by both parents, while 23.1% were brought up by other relatives especially the grandmothers.

TABLE 17**Some of the Reasons Cited as Causing the Children to Live their Homes**

<u>Reason</u>	<u>Frequency</u>	<u>%</u>
1. Lack of food	33	42.9%
2. Not going to school	24	31.2%
3. Clothing (lack of)	19	24.7%
4. Conflicts at home	18	23%
5. Poverty at home	16	20.8%
6. Lack of Shelter	16	20.8%
7. Influence by others	14	18.2%
8. Lack of school fees	11	14.3%
9. Lacked of money	7	9.1%
10. Being idle	6	7.8%
11. Death (guardian)	2	2.6%
12. To take drugs	1	1.3%

TABLE 18

Attendance At School Before Joining Undugu Versus Psychiatric Morbidity

	PM	NO PM	TOTAL	%
Had attended	23	36	59	29.5
Not attended	9	10	19	11.5
TOTAL	32	46	78	41

Notes:

Chi-square = 0.42

P value = 0.705

Therefore not significant

75.6% of the children had attended school before joining Undugu while 24.4 had not. 81% of the attenders were in urban while 18.5% were in rural schools.

TABLE 19

Reason Given for Leaving School by the 59 Children who Were in
School Before joining the Streets

<u>Reason</u>	<u>Frequency</u>	<u>%</u>
Lack of fees	43	74.1
Lacked uniform	39	67.2
Lacking books	41	70.7
Peer pressure	15	25.9
Punished by teachers	2	3.4
Being pregnant	0	0
Distance to far school	1	1.7
Other reasons	8	13.8

TABLE 20

Those attending schools at the Time of the Interview (frequency table)

	<u>Frequency</u>	<u>Percentage</u>
Not attending	9	11.53
Attending (formal)	58	74.4
Attending (informal)	11	14.1
TOTAL	78	100

TABLE 21

Having Been on the Streets or not Vs PM

	PM	NO PM	TOTAL	%
On the Streets	22	30	52	66.6
Not on the Streets	10	16	26	33.3
TOTAL	32	46	78	100

P value = 0.597

Not significant

Two thirds or 66% of the children had taken off to the streets before joining Undugu.

Most of these were boys. One third (33.3%) had not been to the streets.

TABLE 22

Frequency table for Some of The Worst Experience on the Streets

<u>Worst Experience</u>	<u>Frequency</u>	<u>Percentage</u>
1. Lack of shelter	37	72.5
2. Lack of food	34	66.7
3. Police harassment	29	56.9
4. Lack of clothes	17	33.3
5. Having to sniff glue	9	17.6
6. Having to eat stale food	8	15.7
7. Lack of medical care	6	11.8
8. Being raped	6	11.8
9. Public harassment	5	9.8
10. Harassment by Street boys	5	9.8

Notes:

The experiences reported as worst by the children who had been to the streets were: lack of shelter, lack of food and harassment by the police.

6 of the girls (11.8%) of the total, claimed to have been raped while on the streets.

TABLE 23

(Psychoactive Substance) -

Children who admitted to having abused drugs at one time or another Vs PM

	PM	NO PM	TOTAL	%
Took or taking drugs	15	21	36	46.2
Never taken drugs	17	25	42	53.8
TOTAL	32	46	78	100

Notes:

Chi-square = 0.02

P value = 0.901

Therefore not significant

36 or (46.2%) of all children had taken drugs.

TABLE 24

Frequency Table For History of Psychoactive Substance Abuse

<u>Drug</u>	<u>Frequency</u>	<u>% of total</u>
Cannabis	21 (58.3%)	26.9
Alcohol	2 (5.55%)	2.6
Inhalants	22 (61.3%)	28.2
Nicotine	13 (36.1%)	16.6%
Sedatives	2 (5.55%)	2.5%

Notes:

1. Total number of children who admitted to having abused drugs was 36 (46.2%).
2. Order in which drugs were abused from the most common was: Inhalants, cannabis, nicotine, sedatives, alcohol (the last two had the same frequency).
3. Most of the children abused multiple drugs as can be noted from the frequency column total which exceeds 36.
4. There was no obvious correlation between the drug of abuse and psychiatric morbidity.

DISCUSSION

Limitations

Data Collection

Some of the difficulties experienced during data collection include, long delays that occurred when children could not be interviewed as they were busy entertaining visitors who had come during one of the days. The encouragement and cooperation given by the staff however kept the author going in spite of the delay. Problems were also encountered in getting the house mother to supply information about the children. This was mainly because they were involved in carrying out their normal duties. The problem was more acute in Kitengela where there appeared to be shortage of staff since a lot of activities were going on, Kitengela being one of the latest (and most modern) community home by Undugu. There were many buildings still under construction.

To cope with this problem the author had to consult with the older girls who also knew the child well until the housemother was available. Any information which could be in doubt was corroborated.

In the Dandora and Eastleigh homes, the situation was more relaxed and data collection was much smoother.

Information on Drugs

Much reassurance was needed while gathering information on drug abuse, in order to encourage honesty by the children. Since Undugu emphasises the need to abstain from drugs, some children tended to shy away from the question, fearing punitive measures against them. However, with such reassurance they spoke more openly on the subject.

Those who had not quit the habit were reported by the house parent and by other children as well as self reporting.

Prevalence of Psychiatric Morbidity

In the present study it was found that 41% of the 78 children (37 boys and 41 girls) had a clinically significant psychiatric problem as defined by DSM IV.

This prevalence rate is much higher than in other findings by researchers such as Kang'ethe R.N. (1988) who studied 303 children (164 boys and 139 girls) and found a prevalence rate of 20%. It is also higher than that found by Gatangi A.S.M. (1987) who did a study among children and young persons admitted into an approved school in Nairobi in which he found a prevalence rate of 24.8%. Gatangi's study differs from the present in that his was a study among juvenile delinquents - children who had committed acts which when committed by older persons would be punishable as a crime.

Minde (1974, 1975) found that 18 - 24% psychiatric morbidity was present among Ugandan Primary school children. W.H.O. study of 1981 (Giel et al) showed that 12 - 29% of children aged 3 - 15 years attending primary health clinics had psychiatric illness.

Different social economic set-ups with different patient populations may also account for differing rates of psychiatric morbidity. Reviewing literature on seventy studies concerning psychiatric morbidity (PM), Dohrewend (1974) found varying rates of PM ranging from 1 - 69%. Minde (1974, 1975) also found varying PM rates, a high rate of 24% in an urban setting and a lower rate of 10.5% in a rural area in Uganda.

The very high prevalence of psychiatric morbidity in the present study could be due to the fact that in this sample, there were several risk factors to psychiatric illness at interplay. Some of these included poor social economic status being orphan (20.5% of the children had no living parent), having an unstable family background, stigma of being in an institution which is considered to be 'social outcast'; among others.

Anxiety and depressive disorders were the commonest conditions among the population studied. These had a prevalence rate of 11.53% and 14.1% respectively. These findings are consistent with those of other studies which report a high prevalence of neurotic disorders and depressive states. Of significance however is the low prevalence of conduct disorder which accounted for only 2.56% of psychiatric morbidity. Unlike in the study by Kang'ethe R.N. (1988) who found a similar rate of 2.6% in conduct disorder, the author expected a higher rate than this. Whereas Kang'ethe R.N. did a study among children attending Kawangware Health Centre but who were otherwise from an ordinary though economically deprived urban community, majority of the children in the present study had been on the streets and were part of a population where one would expect high prevalence of conduct disorder. A possible reason for the above finding is that there is a high selectivity for who is able or not able to leave street life for Undugu. Children with conduct disorder would also find it difficult to adhere to the rules that are common in all institutions, and to maintain an average level of discipline needed for peaceful co-existence. Children with conduct disorders are therefore more likely to opt out of Undugu as all children are there voluntarily.

Age

Children included in this study were all between 8 and 18 years. Those between 8 -12 years were 20 while 58 were between 13 and 18 years. Prevalence rates among the younger age group was 45% while for the adolescents (13 - 18 years) was 39.7%. The rate though higher among those between 8 - 12 years, chi-square tabulations showed no statistically significant difference between the two.

Some studies however have shown a difference in the prevalence of psychiatric disorders in adolescence with that observed in childhood. Studies of adolescent populations have yielded

prevalence rates varying from 8 percent to 21 percent depending on the criteria used, the population studied and the sex of the subjects.

The Ontario child health study yielded data on the prevalence of psychiatric disorders in children aged 4 to 16 years in the Canadian Province of Ontario (Boyle et al, Offort et al 1987). In that study a representative sample of house holds from various parts of the province was selected; children living in institutions were not included. The results highlighted the differential changes in prevalence rates with age which were as follows:-

	4 - 11years	12 - 16years	4 - 16years
Boys	19.5%	18.8%	19.2%
Girls	13.5%	21.8%	16.9%

The difference in psychiatric morbidity among different age groups was much more significant among the girls and here psychiatric morbidity was higher with increasing age. The boys showed a less marked difference by age.

Leslie (1974) studied 13 and 14 year olds in Blackburn, a British Industrial town and found prevalence rates of 20.8 for males and 13.6 for females. The prevalence rates of the present study are much higher due to the fact that the population being studied differed in many aspects from those mentioned above.

The apparently higher prevalence of psychiatric morbidity among the younger (8 - 12 year olds) could be attributed to the fact that this age group has had less time for adjustment from the various traumas experienced. The older age group (13 - 18) could have developed better coping skills which are protective against psychiatric morbidity.

Sex

The study sample consisted of 41 girls and 37 boys. 15 boys (or 40.5% of the total sample of boys) had psychiatric morbidity compared to 17 girls (or 41.46 of the total sample of girls). There was therefore no significant sex difference in the overall rates of psychiatric morbidity. These results are similar to those of Kang'ethe R.N. (1988) in the Kawangware study but differ from others which showed a higher prevalence of psychiatric morbidity among the males (Rutter 1970, 1976).

Leslie (1974) studied 13 and 14 year olds in Blackburn and found a higher prevalence of psychiatric morbidity among boys.

As pointed out by Rutter et al the sex ratio means very little unless the diagnosis is taken into account. Depressive illness was significantly higher among the girls while enuresis had a ratio of 1:1. Anxiety disorders and stuttering were commoner in boys.

A male:female ratio of 1:1 in conduct disorder in the present study is unexpected as this is usually higher in boys. The relatively smaller size of the sample studied could contribute to this finding.

Depressive Disorders

These were commoner among the girls although overall prevalence rate was also high. Out of the 32 children with psychiatric morbidity, 9 among the girls had depressive illness and this amounted to 34.4%. Boys with depressive illness were 2 (or 6.25% of total psychiatric morbidity). Prevalence rate of depression among the total sample studied was 14.1%.

Symptoms among these subjects were often of psychosomatic nature. Various pains symptoms were given including headache, chest pain and other generalised body pains. In addition there were complaints of unhappiness, anhedonia, forgetfulness, poor sleep, loss of appetite, constipation and nightmares. Some reported feelings of worthlessness while one reported suicidal ideation.

Both depressive feelings and depressive disorders become commoner after puberty. When the Isle of Wight children were studied at 10 years, 13% showed depressed mood at interview, 17% failed to smile, and 15% showed poor emotional responses. At 14 - 15 years of age, over 40% reported feelings of misery and depression, 20% described feelings of self depreciation, 7% reported suicidal feelings and 25% ideas of reference. There were 9 cases of depressive disorder and another 26 with 'mixed affective disorder' (of which depression was a feature). The sex ratio also changes at puberty. Before puberty there are twice as many boys as girls with depressive symptoms, whereas after puberty the situation is reversed. The author observed similar trends in the present study.

Anxiety Disorders

The next common problem in this study was anxiety with 9 children (or 11.5% of the total sample). These children met criteria for diagnosis of generalised anxiety disorder. In anxiety states and related disorders, the subjects anxiety is directly expressed. These children may be shy, timid and clinging, emotionally immature, overdependent and poor at mixing with other children. They may fear loss of family members or death or other disaster. They may have difficulty in getting to sleep and they may have dreams, night mares or frequent waking. There may be free floating anxiety, that is anxiety which comes to be associated with any situation the child may be experiencing. Distractibility and impaired concentration may accompany feelings of general apprehension.

Common manifestations of anxiety in these children are loss of appetite, feeling of nausea, abdominal pain, headache, dry mouth, rapid heart beat and sweating. Restlessness and feelings of tension are also often present. It is clear from the presentation of anxiety listed above that there are many symptoms which may be common to both anxiety and depressive disorders.

This is further complicated by the fact that the two can also co-exist in any one case. Accurate diagnosis therefore depends on assessment of the relative severity of anxiety and depressive symptoms and on the order in which they appeared.

In the present study boys had a higher prevalence rate for anxiety disorder than girls, the rates being 5 boys (or 33% of all boys with psychiatric morbidity) and 4 girls (23.5% of all the girls with psychiatric morbidity). These results are difficult to compare with other findings due to differences in the diagnostic categories used.

Mental Retardation

Three children (3.8% of the total sample of children), two girls (4.85 of the total number of girls and 1 boy (2.7% of the total number of boys) were found to have mental retardation. All these had mild degrees of retardation and showed poor educational performance.

Two of the children, (a girl and a boy) had enuresis. The second girl had scars on the face and hands, signs that were indicative of possible child abuse. Compared to the girls who were 9 and 11 years, the boy was 16 years old and had epilepsy. He was performing fairly well in a special school.

The prevalence rate of mental retardation found in this study is much lower than that reported in the African literature on Child Psychiatry. The rate has varied from 4% as reported by Mbatia among Tanzanian children to 60%, the highest rate having been described in Western Africa by Olatawura et al (1982).

In Uganda, German and Muhangi (1975) found that among those attending a child's guidance clinic 24.2% suffered from severe mental subnormality. Rates were higher in those studies where epilepsy was an added complication. Mental handicaps in such cases are more obvious and are easily diagnosed.

Though the sample was small, mental retardation appeared more

common in girls than the boys in this study. This finding differs from that of Kang'ethe (1988) who found more mentally retarded boys than girls by a ratio of two to one. Her finding was similar to that by Mengech et al (1983) and Dhadphale et al (1983) among the school health population in Kenya, and also concurred with Mwita;s (1985) finding.

The reason for these differences in sex ratios could be contributed to by the fact that the majority of the boys in this study were among those rehabilitated from the street life. This life style is difficult and a mentally retarded child would find it difficult to cope. On the other hand a considerable number of girls were introduced to Undugu directly from the community and they included those in special difficulties which could include the mentally subnormal. It is notable that both girls diagnosed to have mental retardation had not been to the streets, and there was no case of the same from those who had been to the streets.

Enuresis

There were a total of five children with enuresis, three of them being boys. These made up 6.45% of the total sample, and 8.1% males (out of the boys) and 4.9 females (out of all the girls). These prevalence figures and the male preponderance among enuretics are similar to other investigations (Cederbald, 1969, Rahim, 1972, Rutter et al 1970). In the present study enuresis was found to occur as an isolated disorder in two cases (2.6% of the total sample - one boy and one girl). The other three children were found to have other psychiatric problems as well as enuresis.

Conduct Disorder

In this study, conduct disorder accounted for 2.6% of the total sample which were two cases of one boy and one girl. Lambo (1960) had observed that conduct disorders were extremely rare in most African countries in the past. This was mainly due to strict cultural influence with emphasis on respect for authority and the elders. However due to the changing social cultural

values (more marked in urban and peri-urban areas of the cities and large towns), the last two decades have seen profound changes in this respect, with a steep increase in these disorders in many developing countries (Kagwa, 1969; Goodall, 1972; Minde, 1976). Features that characterised those diagnosed to have conduct disorder included stealing, lying, fighting and poor interpersonal relationship among peers and the authority.

In the Isle of Wight study (Rutter, Tizard and Whitmore 1970) nearly two third of the 10-11 year olds with psychiatric disorders were found to have conduct disorders. Including the children with mixed neurotic and conduct disorder, the prevalence of conduct problems was 4%. In a London Borough studied later it was 12% (Rutter, Cox et al 1975). Leslie's (1974) survey of adolescents in Blackburn, England, showed prevalence rates of 13% for boys and 6% for girls.

Conduct disorders have repeatedly been shown to be commoner in boys than in girls. The Ontario child health study (Offord et al 1987) revealed the following percentage prevalence rates for conduct disorders:

Boys (12 - 16 years): 10.4

Girls (12 - 16 years): 4.1

Kang'ethe, (1988) found a prevalence rate of 2.6% for conduct disorder. She found a boy:girl ratio of 5:1. In Africa, the rates of conduct disorders among children, have in general been conflicting. Some workers listed no such cases in their samples (Muhangi; German) while others have given rates ranging from 3 - 14%. Adamakoh (1973) reported rates of 3% among Ghanaian children. In Nigeria, Izuora (1970) reported 5.5%, while Olatuwura and Odejide (1981) reported 10%. In Uganda, Minde (1975) reported rates of 14%. While these differences may be accounted for by differences in the samples studied, and the research methodology used, it may also reflect the differing

rates of social cultural changes in the respective countries.

The possible reasons for the low prevalence rate found in this study have already been discussed. The similarly low figures by Kang'ethe (1988) were accounted for partly by the fact that some of the children with conduct disorder symptoms and neurotic features were pooled together with the neurotic disorders.

Stuttering

Stuttering is classified in the DSM IV among the disorders usually first diagnosed in infancy, childhood, or adolescence as one of the communication disorders characterised by difficulty in speech or language. There is a disturbance in the normal fluency and time patterning of speech that is inappropriate for the individual's age.

The prevalence rate of stuttering in pre-pubertal children is 1% and drops to 0.8% in adolescents. Male to female ratio is approximately 3:1.

In the present study 2.56% of the total sample had difficulties of speech and were diagnosed to have stuttering. Both were boys and they had no other disorder.

Stuttering is not usually part of a general psychiatric disorder. The causative role of emotional disorder is in most cases small, though anxiety may either complicate or exacerbate the condition.

Drug Abuse

46.2% (36 out of the total number of children interviewed) admitted to having abused drugs at one time or another in their lives. The type of drug abused and the frequency are as shown on table N0.21.

The males were found to have abused drugs more than the girls by

a ratio of 1:2.5. This is consistent with the finding by Wangari (1993) in a study on drug abuse among urban as compared to rural secondary school students in which she found ratios ranging from 1.6:1 to 5:1. Unlike in Wangari's (1993) study, where those who abused/used drugs were in the age group 16 - 20 years, in this study age was not a determinant of who had/had not used drugs.

The commonest drug of abuse in Wangari's (1993) study was alcohol followed by tobacco and inhalants ranked third. In this study inhalants were found to have been abused most followed by cannabis, nicotine with alcohol and sedatives being the least abused.

Availability of the various drugs, could have played a major role in determining which drugs were abused and by whom. The prevalence rate among those who admitted to having used drugs could be higher than the actual figure of 46.2% reported in this study since some of the children appeared to shy away from the question on drug abuse. Most of the abusers admitted experience with more than one drug.

Cannabis Use Disorder

According to DSM IV substance related disorders are divided into two groups: Substance Use disorders and Substance Induced disorders. Substance use disorders comprise of substance dependence and substance abuse. In both there exists a maladaptive pattern of substance use, leading to clinically significant impairment or distress. In the criteria for substance dependence three out of seven listed symptoms are necessary for diagnosis and may be inclusive of symptoms of tolerance and withdrawal.

3 children or 3.84% of the population studied met the diagnostic criteria for cannabis dependence. These children persisted to use drugs despite all efforts to discourage them from the habit by the institution.

The prevalence of children actively abusing drugs at the time of

study is much lower from that of those who admitted to having abused drugs (46.2%) but had overcome the habit. This finding is probably due to the following:-

1. Reduced availability and access to drugs in the new environment compared to street life.
2. Health education for knowledge, change of attitude and practice.
3. Idleness which would encourage abuse of drugs is discouraged by making sure that all children attend school or occupational training while there are organized leisure activities.

RECOMMENDATIONS

This study has shown that there is substantial psychiatric morbidity (41%) among children undergoing rehabilitation in institutional homes. Although these children have fairly adequate medical care for physical problems, there is need for more attention to be paid to their psychological health.

According to the study by Kang'ethe R.N. (1988) at Kawangware Health Centre only 10% of the cases with psychiatric morbidity were recognised as such by the primary health care staff. For proper assessment and management of any mental health problems among the children, the primary health care workers would have to receive relevant training which will enable them to cope with the ever increasing need for psychiatric services. Such training can be given in special seminars (and in service trainings) organized for health workers already in the field.

Psychiatry should also be more thoroughly taught to the medical and paramedical students who should be well equipped in handling more common mental health problems. To this end, it is noteworthy that the new syllabus for the Nairobi Medical School caters for this at the undergraduate level. This is in accordance with Kenya's mental health policy guided by the World

Health Organization (WHO) recommendation which urges member countries to do more about mental health including putting emphasis in training of middle level cadres of mental health (GPs, nurses, clinical officers) and emphasis on mental health to be put in the training of all health workers. Cases requiring a specialist's attention should be referred accordingly and the primary health workers should be able to identify patients who need such care.

Institutions taking care of children should ensure that proper psychiatric services are available, and these should not be assumed to be present in any type of medical setting.

Although social workers were noted to be working closely with the children and were able to counsel and also help them in many social problems, they should be made more aware of the existence of problems beyond their scope and be encouraged to refer such cases appropriately.

Multidisciplinary approach in the management of such children usually yields better results and as such the social worker who is usually the first to come into contact with the child, should involve other members of the team in the management of problems where necessary. The psychiatric team should involve among others a psychologist and a psychiatrist.

Future Research

More work needs to be done among children currently on the streets and other children in specially difficult circumstances. This would be pivotal in providing basic protection for the normal physical and mental development of children in accordance with the African Charter on the Rights and Welfare of the Child.

Case Vignettes

1. A 13 year-old girl from a family of 3 siblings, two male, one female was found to have sleeping difficulty. She cried easily and had poor appetite. She even had contemplated committing suicide at some point due to 'family problems'. She also indicated having bad dreams about relatives dying especially the mother.

She also dreamt about her own death and would wake up startled. She experienced difficulties in school due to an inability to concentrate and complained that she forgot easily. She claimed to fear communicating her feelings of sadness to the house mother but did not give any specific reason as to why. She had been to Undugu for one year having left home for the streets due to what she said was lack of food, failure to go to school and influence by peers. She had dropped out of school before Std. 4. Both her parents were alive but separated. She had been brought up by the mother who was also unemployed and lived in Mathare slums. She claimed there was police harassment, harassment by street boys and had to make do with stale food and lack of shelter.

Mental status examination revealed her to be quite anxious with an element of depression. She was put on tricyclic antidepressants and psychiatric follow-up recommended at Kenyatta National Hospital.

2. 16 year-old male from Eastleigh Undugu boys home. He was the first born from a family of eight siblings, six of them being male. His parents were living together in the Korogocho slums near Kariobangi. He had been on the streets for four months having left primary school before completing Standard 8. He claimed that his parents were unable to raise his school fees. On the streets he was introduced to drugs which included glue and cigarette smoking. He claimed to have been unhappy to leave school since most of his friends were in school. Other problems he was facing at home included quarrels by the mother and lack of concern by the father regarding the affairs of the family. He also indicated that food was scarce in the home and he had to eat from the dustbins. This also contributed greatly to his moving away to the streets.

At the interview the boy admitted to feeling sad often and was lonely. He claimed to be missing the members of his home though he could not leave the institution as he wanted to complete his training. He indicated that "I think a lot about my future life' and was uncertain about it. He was reported to have disturbances of emotion and appeared anxious often. He could get frequent chest pains, headaches and occasional difficulty in breathing. There was no family history of asthma. His main ambition was to complete his training in tailoring.

On Mental State Examination - he appeared depressed and preoccupied about the problems in the family and especially his fathers indifference to the family needs.

3. A 13 year-old girl originally from the Kawangware slums, eighth born from a family of ten siblings had been unable to continue with school due to 'family problem'. She never joined the streets but was introduced to Undugu society of Kenya after the death of her mother following bouts of vomiting blood. She could often get scared or nervous for no good reason and had multiple somatic complaints. She cried often. On Mental State Examination she appeared

depressed and claimed to hear voices of her mother and could turn only to find that she was not there.

INFORMED CONSENT AGREEMENT FOR PATIENTS

I, _____, (name of informer) hereby volunteer to participate in a research study entitled, PSYCHIATRIC MORBIDITY AMONG CHILDREN ATTENDING UNDUGU SOCIETY OF KENYA HOMES, under the direction of Dr. Mwangi S.M. The implications of this voluntary participation, the nature, duration and purpose of the research; the method by which it is to be completed have been explained to me by:

DR. MWANGI S.M. (name of investigator).

I have been given an opportunity to ask questions concerning this investigational study. Any such questions have been answered to my full and complete satisfaction. Should any further questions arise concerning my rights I may contact;

Dr. Mwangi S.M. at the Department of Psychiatry, Kenyatta National Hospital, 726300 Ext.43562.

I understand that I may any time during the course of this study revoke my consent and withdraw from the study without any penalty or loss of benefits. However, I may be requested to undergo certain examinations if, in the opinion of the attending physician, such examinations are necessary for my health and well being.

My refusal to participate will involve no penalty or loss of benefits to which I am otherwise entitled.

Informer's signature _____ Date _____

Home address _____ Date _____

Tel.: _____ Office: _____

Study number: _____

I was present during the above explanation, and opportunity for question and hereby witness the participant's signature.

Witness's signature _____ Date _____

Witness's printed name _____

Investigator's signature _____ Date _____

Investigator's printed name _____

SOCIO-DEMOGRAPHIC QUESTIONNAIRE (APPENDIX I)

1. AGE
2. SEX
3. STATION.....
4. PAST RESIDENCE
5. HOW LONG HAS THE CHILD BEEN IN THIS INSTITUTION.....
6. NUMBER OF KNOWN SIBLINGS..... MALE.....
FEMALE
7. BIRTH ORDER IN THE FAMILY: AMONG THE MALE SIBLINGS.....
AMONG THE FEMALE SIBS.....
8. PLACE OF BIRTH.....
9. ORIGINAL HOME OF PARENTS.....
10. DO YOU KNOW YOUR PARENTS? YES - BOTH NO
MOTHER ONLY
FATHER ONLY
11. ARE BOTH YOUR PARENTS ALIVE? YES - FATHER ONLY
MOTHER ONLY
NO
DON'T KNOW
12. IF BOTH YOUR PARENTS ARE ALIVE, ARE THEY:
A. MARRIED OR TOGETHER B. SEPARATED
B. DIVORCED C. LIVING SEPARATELY
C. OTHER SPECIFY
13. WHO BROUGHT YOU UP? A. BOTH PARENTS B. MOTHER ALONE
C. FATHER ALONE D. RELATIVE(S) SPECIFY
E. OTHER (SPECIFY)
14. WHAT MADE YOU LEAVE HOME.....
15. DOES YOUR FATHER HAVE MORE THAN ONE WIFE? A. YES
B. NO C. DON'T KNOW D. HAVE NO FATHER
16. OCCUPATION OF PARENTS/CAREGIVER:
A. MOTHER'S OCCUPATION B. FATHER'S OCCUPATION
C. OTHER CAREGIVER'S OCCUPATION
17. HAD YOU ATTENDED A FORMAL SCHOOL BEFORE JOINING THIS CENTRE?
YES.....
NO.....
IF YES SPECIFY SCHOOL - RURAL.....
- URBAN.....
18. WHAT PROBLEMS CAUSED YOU TO LEAVE SCHOOL

- A. LACK OF SCHOOL FEES
- B. LACK OF SCHOOL UNIFORM
- C. LACK OF BOOKS
- D. SOME OF MY FRIENDS HAD ALSO LEFT SCHOOL
- E. THE TEACHERS USED TO PUNISH ME
- F. PREGNANCY
- G. THE DISTANCE BETWEEN HOME AND SCHOOL WAS FAR
- H. OTHER (SPECIFY)

19. IF YES, AT WHAT LEVEL DID YOU LEAVE? A. PRIMARY 1-4
B. PRIMARY 5-8

20. ARE YOU ATTENDING SCHOOL NOW? A. YES B. NO

21. IF YES WHERE DO YOU ATTEND SCHOOL?
A. FORMAL SCHOOL B. INFORMAL SCHOOL

22. WHAT WAS YOUR WORST EXPERIENCE IN STREET LIFE?
.....
.....

RESEARCH INSTRUMENT: APPENDIX II

A. REPORTING QUESTIONNAIRE FOR CHILDREN (ROC)

Date:
Child's name:
Father's name:
Mother's name:
Child's age: Years
Sex: Male Female:
Relationship to child of accompanying adult
School: Child never attended.....still attends.....

- | | | | |
|-----|---|-----|----|
| 1. | Is the child's speech in any way abnormal
(retarded, incomprehensible, stammering?) | YES | NO |
| 2. | Does the child sleep badly? | YES | NO |
| 3. | Did the child ever have a fit or fall to
the ground for no reason? | YES | NO |
| 4. | Does the child suffer from frequent
headaches? | YES | NO |
| 5. | Does the child steal things from home? | YES | NO |
| 6. | Does the child run away from home
frequently? | YES | NO |
| 7. | Does the child get scared or nervous for
no good reason? | YES | NO |
| 8. | Does the child appear in any way backward
of slow to learn as compared with other
children of about the same age? | YES | NO |
| 9. | Does the child nearly never play with
other children? | YES | NO |
| 10. | Does the child wet or soil itself | YES | NO |
| | TOTAL SCORE | | |

FOLLOW UP INTERVIEW IF ONE OR MORE 'YES' IS RECORDED.

2. FOLLOW UP INTERVIEW FOR CHILDREN (F.I.C.) - APPENDIX III

A. Symptoms

- (i) Duration of symptoms
 - Less than six months.....
 - 6 to 11 months
 - 12 to 23 months
 - 24 to 35 months
 - Not known
- (ii) Symptoms present in last year
- a. Disturbances of emotions (anxiety, depression etc.)
- b. Obsessions, compulsions or rituals
- c. Stereotypes
- d. Autistic-type abnormality in.....
- e. Disturbed relationships with family
- f. Disturbed relationship with peers.....
- g. Anti-social behaviour (non-delinquent)
- h. Delinquent acts
- i. Hyperkinesis
- j. Enuresis or Encopresis
- k. Retardation of abnormality in speech of language
- l. Eating difficulty.....
- m. Sleeping difficulty.....
- n. Somatic symptoms thought to be of emotional origin
- o. Retarded in educational attainments.....
- p. Other symptoms specify.....

APPENDIX IV

Drug Use and Abuse Self Reporting questionnaire.

Which of the following drugs did you ever take or are taking now?

1. Alcohol
2. Amphetamines
3. Caffeine
4. Cannabis
5. Cocaine
6. Hallucinogen
7. Inhalants
8. Nicotine
9. Opiod
10. Phencyclidine
11. Other (specify)

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