MEDICAL AND PSYCHOSOCIAL ASPECTS OF CHILDREN IN KOBER AND ELGERAIF REFORMATORIES

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ABSTARCT

Data from two educational homes for juveniles (Reformatories) in the Sudan was collected to detect the common medical problems, to assess the psychosocial profile and to identify factors associated with offending. Self administered questionnaire with supplemented questions on sociodemographic data including drug history, substance abuse, features of both medical and psychiatric problems along with detailed informations about the offence were stated. Another questionnaire, strength and difficulties questionnaire, which is a behavioral screening covering item on psychosocial attributes, was also administered. Complete physical examination was also recorded.

There were 120 detained children with age ranging 10-17 years, the peak age of convicted children was found to be 15-17 years with predominance of males. The majority of detained children belong to a low social classes (94.2%), with condemnation being the main cause of placement (43.3%). The most common health problem was substance / alcohol abuse which was reported in (54%), followed by dermatological conditions which accounted for (30.8%). Intestinal parasitisms were reported by (11.6%). Enuresis was found in (11.6%), schistosomiasis affected (6.1%)

and upper respiratory tract infection which was encountered in (6.7%). The prevalence of HBV seropositive was (4.9%) while psychiatric disorders were diagnosed in (40%) which were mainly conduct disorders (83.3%), with an overlapping between different psychiatric disorders. Being an offender was significantly affected by the state of poverty (P. value <0.000). However, it was not affected by the state of coming from large families, other offenders in the family, poor education or repeated offending.

It concluded that the common health problems are substance / alcohol abuse, dermatological problems and intestinal parasitism. Psychiatric disorders were diagnosed in more than one third of convicted children with conduct disorders being the most common. Being an offender was significantly affected by the state of poverty (P<0.000).

INTRODUCTION:-

Over the last decades there has been a dramatic increase in the juveniles detained or confined to correctional care facilities[1]. Detention facilities offer a unique environment in which adolescents at high risk for medical problems can be identified and treated, this unique milieu also offer an opportunity for screening, assessing and managing those young people[2]. Rather than punishment, delinquent youth require protection and rehabilitation[3]. Educational homes for juveniles (Reformatories) are homes where reformation, rehabilitation and education's of such children takes place in a period which should not exceed 5 years according to the court judgment[5].

Kober Reformatory

It is the first one in the Sudan, which was established in 1950 under supervision of the Prison Department. Its name was changed from reformatory to Education Home for Juveniles in 1983 following Sudanese Delinquent Prevention Act. Delinquent

males of age 15-18 years from all over the Sudan were admitted there[6].

Elgeraif Reformatory

Was established at the beginning of the fiftieth under supervision of the Prison Administration. It accommodates convicted juvenile males from 10-14 years as well as convicted females of any age from 10-18 years in separate wards[10]. Medical problems in both reformatories are dealt with in small clinics and difficult cases are referred to the police hospital because of shortage of facilities and drugs[6,7].

Adolescents entering correctional care facilities may be at a higher rate than unincarcerated youth for certain problems, which includes: drug use and abuse, human immunodeficiency virus (HIV) and pre-existing mental health disorders[8]. Those who are living outside the frame work of the normal adolescent support system of the family and school frequently receive no medical care during adolescence[2]. The need of this care was appreciated by the American Academy of Pediatrics in 1973 when a policy statements about health care for correctional care facilities was published to assist in improving their system for providing health care[4,9]. Medical problems were reported in 46% of incarcerated youth entering correctional care facilities in the United States[2].

Every institution which, confines juveniles should have a health program designed to protect and promote the physical and mental well being of residents. This is to discover those in need of short-term or long-term medical and dental treatment and to contribute in their rehabilitation by appropriate diagnosis and treatment and provision of continuity of care following release[9].

To increase the knowledge of health problems among juvenile delinquents in correctional centres, a study was conducted in Spain concluded that almost all studies in such an area had been

conducted in United State 63%; West Europe 24%, Australia 8% and 5% in Canada[10].

Studies from USA have shown that the prevalence of psychiatric disorders in incarcerated adolescents is 63.3%[19]. Studies from different countries have shown that there are many factors associated with offending such as social factors, family factors and factors related to the child[23,26,18,27,28,20].

PATIENTS AND METHODS

Design:

This is a descriptive, prospective institutional based study conducted in two educational homes for juveniles (reformatories), Elgeraif and Kober Reformatories in Elgeraif West and Khartoum North (Kober) respectively, during the period from July 2003 to Jan 2004. All detained children from age 10-17 years were enrolled in the study with a total population coverage of 120 children, excluding those who refused to participate in the study. Written consent was obtained from the authorities in the prison administration as well as from reformatories administration, while informal consent was taken from the children.

A standardized questionnaire was designed which included the demographic characteristics and a detailed history with emphasis on family and psychosocial data as well as drug history (Substance abuse) and detained information about the crime. Another questionnaire, strength and difficulties questionnaire was also used for data collection about emotional, conduct, hyperactivity attention, peer and prosocial behavioural screening. The children were directly interviewed and thoroughly examined.

General investigations, HIV and HBV infections screening were done for all children. Other investigations were done when

needed. All data collected was analyzed using SPSS.

RESULTS:-

The study included 120 detained children (100 from Elgeraif reformatory and 20 children from Kober). The peak age of the study group is 15-17 years in (57%) with male predominance (89%). There were 93 children (78%) who had only primary school education, 13 children (11%) were illiterate, three children (2%) attended Khalwa and 11 children (9%) had intermediate school education.

Regarding substance abuse, it was looked in 120 detained children. 65 children (54.1%) used alcohol, 22 children (18.3%) were cigarette smokers and 20 children (16.6%) were Silisyon users. 18 children (15.2%) were Tombak users, nine children (7.5%) and only one child (0.8%) used Benzene and Cannabis respectively **(Table1)**. The main reason for placement was condemnation (43.3%) which was mainly due to financial causes, followed by Murder in 23 children (19.2%) then comes physical violence in 14 children (11.7%) and sexual crimes in 18 children (15%).

Out of the 120 detained children 78 children (63.9%) reported one or more clinical symptoms. The main finding was substance abuse, which affected 65 children (54.1%). This was followed by skin problems which were found in 37 children (30.8%). Of these 14 children (11.7%) had Eczema, two children (1.6%) had Milliaria, six children (4.9%), were affected by Tinea, one (0.8%) had Vitilligo and one (0.8%) had Urticaria. Fourteen children (11.6%) had Enuresis, while 14 children (11.6%) were affected by manifestation of intestinal worms. Cough was found to be the main complain of nine children (7.5%), while eight children (6.6%) had fever. Three children (2.5%) had physical impairment; one child with short left lower limb which was possibly due to Polio and two children with loss of one of their

eyes, one was due to neglected infection and the other due to trauma. Three children (2.5%) had loss of weight **(Figure1)**. While clinical signs were detected in 44 children (35.7%). Skin lesions were found in 24 children (20%), followed by pallor, which was found in six children (5%). Four children (3%) had spring catarrhal, while three children (2.5%) had underweight. Another three children (2.5%) had physical impairment, while each of umbilical hernia, gynacomastia, crackles and wheeze were found to affect one child (0.8%) as shown in **Table2**.

There were 6 children (4.9%) and two children (1.6%) who had both types of bilharsiasis (Urinary and intestinal respectively). Worm infestation was confirmed in 13 children (11%) while two children (1.6%) had Giardia trophozoite. The prevalence of HBV seropositive was (4.9%), while all children who were enrolled in the study were HIV seronegative.

The prevalence of psychiatric disorders was detected in 48 children (40%). Regarding pattern of psychiatric disorders of 48 detained children, forty children (83.3%) had conduct disorders, while 25 children (52%) were affected with prosocial disorders. Hyperactivity disorders were found to affect ten children (20.8%). Peer problems and emotional disorders were found in eight children (16.6%) and five children (10.4%) respectively **(Figure2)**. Regarding factors that were associated with being an offender, 113 children (94.2%) were of low social class. So being an offender is significantly affected by coming from a low social class ($P<0.000$). Thirteen children (10.8%) were illiterate and 36 children (30%) were from very large families. In 17 children (13.8%) there was another offender in the family, nine of whom (7%) the offender was the brother, with (P. value=1.1 and 0.292 respectively). It was found that being an offender was not affected by poor education, a very large family and presence of other offenders in the family. Forty one children (34.8%) committed the offence in groups of peer, while 31 children

(26.1%) committed offences twice or more (P. value=1 and 0.99). So being an offender is not influenced by peer effect and repeated offences **(Table3)**.

Table (1): Substance abused by the detained children

Substance abuse by children	Frequency	%
Alcohol	65	**54.1**
Cigarette	22	**18.3**
Silisyon	20	**16.6**
Tomback	18	**15.2**
Benzene	09	**07.5**
Others	01	**00.8**

Table (2): The main signs of the study group

Symptoms	Frequency	%
Skin lesions	24	**20**
Pallor	06	**05**
Spring catarah	04	**03**
Under weight	03	**02.5**
Physical impairment	03	**02.5**
Umbilical hernia	01	**00.8**
Gynacomastia	01	**00.8**
Crackles	01	**00.8**
Wheeze	01	**00.8**

Table (3): Factors associated with offending

The factor	Response Yes	P.Value
Low social class	0.942	**0.000**
Poor education	0.133	1
Very large families	0.30	1
Other offender in the family:		
Father -	0.235	1
Mother -		
Brother -	0.059	1
	0.529	0.292
Peer effect	0.43	1
Previous offences	0.26	1

P.value = 0.05

Figure (1): The main symptoms of the study group

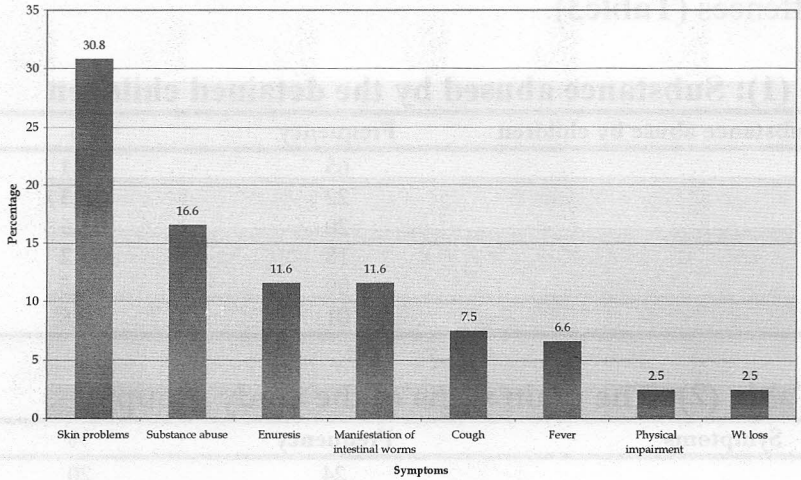
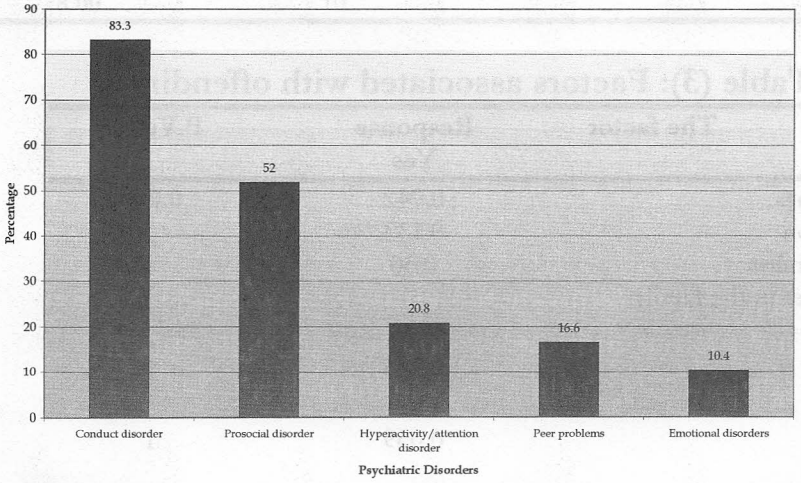


Figure (2): Pattern of psychiatric disorders



DISCUSSION:-

In this study we observed that the peak age of the children detained in Kober and Elgeraif is 15-17 years. This result is higher than a previous report from Elgeraif reformatory and also in other reports from Spain[18,23].

Our study documented that there was male predominance, (89%) were males, which is similar to the results reported by many studies in USA and in the Sudan[23,24,25,26]. This could be explained probably by the nature of males, being more exposed to violence and crime.

The majority of children in the present study (78%) had their primary school education and only (11%) were illiterate compared to the higher rates of illiteracy in a previous Sudanese study[23]. This reflects the educational role of the reformatory, since most of the children in our study had completed their education after detainment.

In the present study alcohol abuse was found in (26.6%) which was higher that what was reported from the Netherlands[17]. This could be explained by the fact that in Sudan some families depend on native alcohol drinks as a source of income. On the other hand cigarette smoking was detected in (18.6%); a finding which is far less than reports from Spain[11,12]. This may be due to their state of poverty and inability to buy cigarette.

In this study the causes of placement of such children was found to be mainly condemnation (43.3%) which was due to financial causes. This could well be explained by the state of poverty and the lower social classes from which such children came from. The second cause was murder which was obtained in 23 children (19.2%). This result showed that children can commit major offence such as murder. Sexual crimes were the reason for (15%) and physical violence in (11.7%). This result is in agreement with the study done previously in the Sudan[23].

Skin problems were found to be the most common current symptoms mentioned by (30%) of detained children, this is more than reports from Spain, but similar to reports from the Foster Care Centre in USA[11,12,18]. This could be explained by their low level of personal hygiene and/or overcrowding of their hostiles. Enuresis was found in (11.6%) which could be explained by the relation between enuresis and the emotional stresses for which they were subjected.

Worms infestation was confirmed in (11.6%) of the children. This is higher than what was reported from Spain and again may be due to the low hygienic level[11,12].

In this study the prevalence of HBV seropositive was (4.9%) which is higher than reports from Spain and LosAnglos[11,12,13]. However, all children enrolled in the study were HIV seronegative, a result which is far less than reports from USA, Spain and Brazil[11,12,14,15,16]. This could be explained by the possibility of that there is a focus for HBV among children which spreads during detention while this is not the situation in HIV.

The prevalence of psychiatric disorders was (40%) a result which is far less than reports from Ontario[19]. Moreover, occurrence of different pattern such as conduct, hyperactivity and others was far less than reports from USA[20,21,22,17]. This result is not correlated with the fact that psychiatric co-morbidity is an associated phenomenon with detention or committing offence. This new result which was confirmed in our children needs further study.

The study documented that being an offender was significantly affected by the state of poverty (P. value <0.000). This result is in agreement with reports from USA and the Sudan[19,23]. This reflects that the main motive of the offences was poverty.

In conclusion, children in juvenile detentional facilities are living in special situation which needs further evaluation, medical care and

psychosocial support.

We feel that since Sudan is being a very large country 25 square kilometers with only two functioning reformatories and detained children from North, West, East and South Sudan were admitted there. So there should be reformatories in each main city in the various states. This will allow these children from other states not to get detached from their families and cultures. Also we recommended that those children should be encouraged to disclose and promote their talents and to continue their education so as to attain jobs later in their life to guard them from committing other offences.

Acknowledgment: We would like to express our gratitude and sincere appreciation for the directors of Kober and Elgeraif reformatories and their staff for their help and co-operation. Also we would like to thank all the children who had accepted to participate in this study.

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ACKNOWLEGMENT

Dr. Amani Gindeel would like to acknowledge Dr.Emad Fadl Almula for his great help, Dr. Samia Mahdi for the technical help (Nileen University), Mr. Omer Elman (Elribat university) who operated on her patient and Dr. Aisha Hassen Bakhit (Islamic University) who was the treating consultant of the patient that was reported and published in the previous issue (Acase of true hermaphroditism presented at the age of thirteen).