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ANOREXIA NERVOSA IN KENYA

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### ABSTRACT

**Background:** Anorexia nervosa is a rare disorder in Africans, inspite of posing a serious public health hazard in the West. Whereas it is possible that African psychiatrists lack the skills to diagnose the disorder, other possible explanations for its apparent rarity must be sought in view of emerging evidence, which suggests a real lack of occurrence.

**Objectives:** To establish the knowledge of practicing Kenyan psychiatrists about the signs, symptoms and management of anorexia nervosa and to establish the number of cases they had seen during all their years of practice of psychiatry.

**Design:** Telephone survey and data collection: case-finding approach.

**Setting:** Kenya, June 2001

**Methods:** Forty seven psychiatrists registered to practice in Kenya as of June 2001 qualified for inclusion. The respondents were interviewed on the same day, to reduce the likelihood of cross checking between colleagues. RK called each one, (all knew her) explained the nature of the survey and obtained verbal consent to administer the brief (10 minutes) questionnaire, developed by the authors for the purpose.

**Results:** Twenty seven of all those eligible were reached on the day. All but one gave consent for the interview (55% response rate). The 20 who were not reached were similar to the respondents with regard to experience in psychiatry, (mean duration 11.4 versus 10.9yrs) but differed in their place of residence, the majority of those not reached resided out of Nairobi (60% versus 26%). In a cumulative total of 320 years of practice, they had seen 16 cases of which seven were of African origin. The rest were Caucasian or of Asian origin. The psychiatrists demonstrated adequate skill in recognising anorexia nervosa.

**Conclusion:** Kenyan psychiatrists can recognise cases of anorexia nervosa. The condition is rare in Kenya. The reasons for this remain unclear and traditional explanations for its cause as due to pressure for thinness may not be adequate for the Kenyan case.

### INTRODUCTION

Traditional explanations for the occurrence of anorexia nervosa (AN) include social pressure for thinness, dysfunctional family dynamics and more recently genetic and other biological factors such as viral infections. Anorexia nervosa was first described by Richard Morton(1), in a case of 'nervous consumption' clearly at the time distinguishable from tuberculosis. Since that time, it has become a well-recognised illness. Schmidt(2) states, "Anorexia nervosa and bulimia nervosa are chronic, often debilitating, disorders with high levels of psychological and physical co-morbidity. The average duration of anorexia nervosa is six years. There is evidence that the course of the illness has become more severe in the past few decades. The mortality of anorexia nervosa is higher than that of any other functional psychiatric disorder and may be rising. The quality of sufferers' lives is poor and the burden on their carers is as high as that in individuals with psychotic disorders."

Three hundred years after Morton's first description, anorexia nervosa is now reported to be a major public health concern in Western Europe and America. The lifetime prevalence in Westernised women is 4% and probably rising. In the UK, the prevalence is even higher in private or grant-aided schools (one severe case of anorexia nervosa for every 100 girls aged 16 to 18 years) and higher still in ballet schools (one case per 30 girls)(3). Lucas *et al*(4), concluded that anorexia nervosa is now the third most common chronic illness in teenage girls in Minnesota, USA.

*Anorexia Nervosa in Africa:* Anorexia nervosa is probably a very rare condition in Africa. A Medline search (for Anorexia Nervosa, Africa) carried out by the authors revealed four possible cases(3,5-7). Nwaefuma's case(5), is described in a letter to the editor that does not give sufficient detail to enable DSM IV diagnosis but one that nonetheless emphasises the rarity of the condition 20 years ago. Buchan and Gregory(6), reported one case in a black Zimbabwean woman that satisfied Feighner's diagnostic criteria but which

nonetheless showed unusual features in the clinical symptoms including the role of a traditional healer in her recovery.

In 1988, Famuyiwa(7), reported two cases of anorexia nervosa in two Nigerian girls. He states; The relatively low prevalence of the disorder that has been observed might be due to the protective influence of the Nigerian extended kinship system, the customary passion for plumpness as an attribute of physical attractiveness, carbohydrate diet, "resistance" and the non-inclusion of cases in hospital records because of consultation with unorthodox healers". The general trend of increasing prevalence calls for more diagnostic vigilance, particularly among doctors serving populations with Third World background. In spite of his prediction, only one further case by Binite *et al*(8), is to be found in the literature.

In 21 years of practice in Kenya, the present author (FGN) has come across only three cases of the condition that meet the DSM IV criteria, none of which were in ethnic Africans. The first two cases were Caucasians and the third was Indian.

One Caucasian girl was Kenyan born (the other British) and developed the fullblown syndrome when she went to the UK at the age of 14 years. Adverse domestic living arrangements, a new culture, the weather and a new school system were identified as precipitants to the illness. She remained anorexic following her return to Kenya six years later. She eventually presented to the author at the age of 25 years for evaluation of possible psychological contributions to primary infertility. At the time of referral, she weighed 38 kg with a height of 1.57m (BMI=15.2). Following many months of supportive psychotherapy that involved her having to write extensively about her experiences in childhood and the trauma of being in the UK as an adolescent, she began to put on weight, her periods recurred, and in spite of persistent fear of putting on weight, she had an obsessive desire to have many children. She now has three children, remains very thin (weight 42kg) and still wants to have as many children as possible, inspite of revulsion to sex, and a desire to remain small. Obsessional features persist, with regard to cleanliness, order in her house and feeding of her children, which involves many stereotyped routines.

The usual explanation for anorexia is that it is an abnormal response to immense social pressures exerted by peers and the media to be slim. However, if this were the case, one would expect rates in Africa to be rising rapidly with increasing globalisation. 21<sup>st</sup> century African girls in urban settings share magazines, television, universities and future with their sisters in the west. There is no longer room for the mistaken perception that Africans still hold that fat women are more desirable. The 21<sup>st</sup> century African is health conscious goes to the gym, exercises and carefully watches his/her diet. The pressure on the girl to be slim

is on, but no corresponding increase in cases of anorexia nervosa has yet been seen.

So where is the condition in Africa? Are the traditional explanations on aetiology adequate? What is the relationship between anorexia nervosa and OCD, both extremely rare diseases in Africa? The stability over time in the incidence of anorexia nervosa in the West is mirrored by the stable absence in Africa(4).

It is against this seeming discrepancy in incidence that the present authors decided to take a detailed look at the situation in Africa, focusing on the Kenyan scene. This paper reports firstly, a study to establish the knowledge of practising psychiatrists about the disorder and, secondly, a case finding approach, through practicing psychiatrists, to establish the approximate prevalence in Kenya.

## MATERIALS AND METHODS

*Sample:* F.G. N. is the Chairman of the Kenya Psychiatric Association. Current members of the association and any person registered as a psychiatrist qualified for interview. Their contact data was readily available in the association's records.

The first part of the study concerns this group. Twenty six out of a total population of 47 were interviewed on the phone on the same day (June 2001). This was done to ensure that they did not get the chance of either checking on diagnostic criteria, or that they did not discuss the questionnaire amongst themselves. In a small closely-knit population, this would pose a real problem.

On the appointed day, phone contact was established with the psychiatrists, starting with those in the same hospital, and extending to the furthest part of the country. All were personally known to the interviewer (RK) and it was easy to explain the purpose of the study. They were requested to answer a few questions on anorexia nervosa and all quickly agreed (except one elderly psychiatrist who insisted on checking his facts first).

Those not reached were either out of the country in two cases, unreachable by phone for various reasons in eleven cases, or out of their offices on the particular day in seven cases. The authors were not interviewed.

Those who participated were given a brief description of the study, its aims and objectives and informed that they may if they so wished decline to participate.

The authors had developed the questionnaire so that the interview would last no more than 10 minutes. The questionnaire was designed to establish demographic information on the respondents, also detail their dates and place of training as well as their knowledge of DSM IV diagnostic criteria as well as contact with anorexia nervosa since they started practicing psychiatry.

## RESULTS

*Response Rate:* Kenya had a total of 47 psychiatrists practicing in Kenya in June 2001. Twenty seven were reached on the day of the interview, one declined and 20 could not be reached, giving an overall response rate of 55%. Those not reached were similar to the respondents with regard to the number of years



**Table 2 (iii)**

*Rural Based Respondents*

1 No. of AN ever	2 No. of Psy	3 Sex		4 Training							5 Age						6 No seen last 5 years						7 AN Criteria			8 Years of practise				
		M	F	Kenya	Over seas	Both	31- 35	36- 40	41- 45	46- 50	50+	0	1	2	3	5+	1	2	3	4	0-5	6-10	11-15	16-20	20+					
0	3	2	1	4	3	3	0	0	0	0	1	3	0	0	0	0	0	2	0	1	0	1	1	0	1					
1	3	1	2	6	0	2	0	0	2	0	1	2	1	0	0	0	0	1	0	2	1	2	1	0	0					
2	1	1	0	2	0	1	0	1	1	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0					
3	0	0	0	1	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0					
5+	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					

1. Number of patients with anorexia nervosa ever seen, 2. Number of psychiatrists, 3. Sex of respondents, 4. Location of training, 5. Age, 6. Number of patients with anorexia nervosa seen in the last five years, 7. DSMIV diagnostic features named spontaneously by respondent, 8. Years in practise of psychiatry

**Table 3**

*Repondents' gender, place of training and current practice*

Variable	X <sup>2</sup>	P-value	Significance
Sex Male vs Female	0.1119	0.998	NS
Training Local vs Overseas	0.318	0.999	NS
Location Rural vs Urban	0.67	0.96	NS

Nairobi is the capital city and is the home of the Kenyan middle classes with the greatest exposure to the Western cultural styles. It is here that one would expect the majority of the cases, if Western cultural lifestyle was a predominant causative factor.

*Patient characteristics:* Of the 16 cases found, 12 were aged between 13-20 years, three quarters were under weight, seven eighths had a change in perception of body weight, all but one were female, 63% were students. It is also significant that only ten of the patients seen were of African descent. Since three psychiatrists had seen the same African patient, the true number of cases comes down to seven for Africans and 13 in total. Asians and Caucasians who contribute no more than 0.25% of the population contributing six out of 13 (46%). This is truly a non African condition.

Therapeutic intervention was variable. Twenty five percent of the patients did not receive any treatment after the diagnosis. The psychiatrists did not feel they could help this type of patient. Sixty three percent of the patients received a combination of limited counselling on diet, self-control and family support, while additional interventions included variable amounts of anxiolytics, antidepressants and phenothiazines. No consistent drug regime was established though the majority (63%) got antidepressants

**DISCUSSION**

This study suggests that AN is undoubtedly a rare disorder in Kenyans. In a cumulative period of 320 years of practice, Kenyan psychiatrists with both local and overseas training have seen an average one case every 16 years! It is unlikely that this group of psychiatrists are seeing but failing to make a diagnosis. All respondents were able to identify spontaneously at least two DSM IV criteria for the diagnosis of AN.

Anorexia nervosa is rare outside Western Europe(9) and this has led authors to argue that eating disorders are a Western disease of cultural origins. Reporting on eating disorders in India, Khandelwal *et al*(10). Writing from a major referral hospital for India (All India Institute of Medical Sciences AIMS) managed only five cases which "though finally diagnosed and treated as cases of eating disorder, they presented considerable difficulty in diagnosis". They did not show over activity or disturbances in body image!

Further East, Lai(11) at the Chinese University of Hong Kong described characteristics of 16 Chinese adolescents with AN. In spite of this small number, he concludes, "it appears that against the background of increasing westernization, the illness is taking a western pattern, in line with the suggestion that

significant concern about weight in anorexia nervosa is a pathoplastic effect of Westernization." The small numbers from Hong Kong further emphasize the rarity of the disorder.

*Theories of aetiology:* What light can these findings cast on the aetiology of A.N? The pressures exerted by cultural desire for thinness have long been thought to be an important cause. Anorexia nervosa has been reported in Europe since the 16th century. If the social dynamic explanation was to be the most important causative factor, then it must be that 21<sup>st</sup> century Africans are unaffected by a desire for thinness anywhere near the pressure of 16th century Europeans. That is unlikely to be the case given the fact of globalization and in particular the fact that at any given time, there are at least 70,000 Kenyan students in Western Europe and America, exposed to the same media as the Westerners. Hundreds of thousands of adolescent Africans have studied in the West since the 1950's, and will have been similarly exposed. In addition, Kenya was a British colony and continues to be influenced by the British, in particular by the media. A marked increase in weight consciousness in Kenya is reflected by the very large number of keep fit clubs in the cities in the last 10 years.

There is also evidence that attitudes are changing with respect to eating habits(12). In this recent paper the authors report a study of a non-clinical female population of adolescent girls in South Africa using a self-report questionnaire (EAT 26) and find an overall prevalence figure of abnormal eating attitudes of 21.66% with the surprising finding of higher rates of abnormality among black pupils (37.5% versus 20.67%). They concluded that their study provides preliminary epidemiological data of girls at risk of developing an eating disorder. However, they provided no evidence of finding a single case of anorexia nervosa. No link can be made between abnormal eating habits in non-clinical samples and AN.

Tests of eating attitudes examine exactly what they set out to do - eating attitudes. They do not measure either anorexia nervosa or the risk of developing anorexia nervosa.

The fallacy of the jump from abnormal eating attitudes to the conclusion of an increase in disease is similar to concluding that there is a high risk of a population developing hypertension because there is a high level of awareness of its causation. We here argue that abnormal eating habits and anorexia nervosa are independent of each other, or at the very least, that people with anorexia nervosa show an aversion for food that is biologically/biochemically determined, while the rest of the population shows a similar, (not the same) type of aversion that is based on cultural factors that do not lead to the disease anorexia nervosa.

Their second paper in the same issue addresses factors influencing eating attitudes in South African girls and uses the same self-report questionnaire. They

find that family, especially maternal factors, play a role in determining eating attitudes (Not anorexia nervosa).

It may be that dieting acts as a risk factor in the context of more specific genetic or biological vulnerability. American studies involving black versus white women have shown marked differences that are only partly explained by the environment(13). Family factors by themselves do not explain the rarity of the condition in Africa. Families similar to those described by Minuchin as overprotective, rigid, and lacking in conflict resolution are common in Africa. Depression and major life events are thought to be important antecedents for anorexia nervosa(14) Depression and major life events are extremely common in Africans and yet do not seem to cause or precipitate anorexia nervosa.

Genetic factors have been implicated. Female relatives of probands have a tenfold greater risk of developing an eating disorder, and twin studies(15,16) have found higher levels of concordance in identical compared to non-identical twins.

More recent work would tend to support genes as playing a role, however, minimal in the aetiology or perpetuation of the disorder. Viral, metabolic and immunological causes have also been implicated(17).

Thus, rarity of anorexia nervosa among Africans is unexplained. Social models of aspiration for thinness among western cultures as the single most important aetiological factor is not supported by the lack of rise in anorexia in non-western societies, and the geographical distribution of the disorder requires a rethink on the aetiology of the disorder.

*Limitations:*(i). The present study was a small one. It had to so be because Africa has few psychiatrists. It is possible that other parts of Africa e.g. Nigeria could replicate this study. (ii). Another limitation is dependence on clinical populations to derive conclusions about the population at large. (iii). The low response rate (55%) is a possible source of error. There was however no difference between respondents and non-respondents with regard to the characteristics under enquiry.

Another recommended approach is to study high-risk groups in Africa. These include female athletes and adolescent girls in westernised schools in Africa. (Kenya has an abundance of both)

*The Future:* If following a study of these groups anorexia nervosa remains truly uncommon, multicentre studies involving comparable groups in the West (UK, USA), and Africa, Asia and the Far East could give clues on the relative contribution of genes and environmental factors to this complex disorder.

Like the now discarded family theories on aetiology of schizophrenia and childhood autism, it is time to take a critical look at the family dynamic theories in the aetiology of anorexia nervosa. Genetic and environmental factors could be at play in the aetiology of this disorder, while family factors act to perpetuate the condition.

Scientific publications must be wary of unsupported statements in this regard, like "in all likelihood, societal modernization intensifies vulnerability to eating disorders in women"(18). Our study does not support this view.

### CONCLUSION

This case finding approach indicates that AN is indeed rare in Kenya despite an increasing degree of westernisation in urban areas. There is no doubt that Kenyan psychiatrists are well able to recognise the disorder. The characteristics of the Kenyan cases confirms that AN is uncommon among indigenous Africans. This study provides circumstantial evidence against the wholly social hypothesis of the aetiology of AN, as if this were the case, one would expect to see an increase in cases in urbanised Africans.

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