

Age and Sex Dependence of Food Intake in the Mount Ayliff District

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SUMMARY

To obtain information on the eating habits of the Xhosa people, required as a basis for nutritional education, a qualitative dietary survey was conducted in the Mount Ayliff district in the Transkei. In this article, the habitual food intake of adults and children, male and female, is compared. Sex and age differentiation is more clearly manifested in traditional foods such as Bantu beer, wild green leaves and beef, than in items such as chicken, pork and cabbage, which have only lately been regularly included in the diet. The value of the school feeding scheme is revealed, as well as the fact that some nutritious dishes are especially favoured by children. The results are considered of importance mainly in directing the efforts of nutritional education.

S. Afr. Med. J., 48, 2357 (1974).

During October and November 1970, the dietary intake of Xhosas in the Mount Ayliff district (Transkei) was investigated by a qualitative dietary survey.¹ The main object of the survey was to establish the habitual food intake patterns of children and adults, male and female. This information was required to plan an effective nutrition education programme for this area.

METHOD

Random samples of 25 locations in the district were drawn, and a total of 573 subjects was questioned. This group was subdivided into 4 different categories (Table I).

TABLE I. NUMBER OF SUBJECTS INCLUDED IN DIETARY SURVEY IN THE MOUNT AYLIFF DISTRICT, TRANSKEI

Age (years)	Sex	No. of subjects
6 - 15	Male	139
6 - 15	Female	153
16 and over	Male	135
16 and over	Female	146
	Total	573

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This survey included food intake on 3 different 'types' of days, viz. weekdays, Saturdays and Sundays. All individual food items were divided into 5 main food groups with several subgroups. The results are summarised here as the percentage of subjects from the total sample who ate at least once a week from a specific food group and a comparison of the number of subjects from each sex-age group who consumed food from a specific food group at least once a week on a percentage basis. In the Tables, percentage differences between children and adults, boys and girls, as well as men and women, are indicated by positive and negative numbers. An open space indicates a non-significant difference.

RESULTS AND DISCUSSION

Cereals are, as expected, the most important food group in the daily diet of the Xhosa (Table II).

Tea, coffee, fat, sugar and sweets were classified as miscellaneous items. This group ranks second, only because about 80% of all subjects drank tea regularly. *Imifino* (wild green leaves) are included in the vegetable group rather than in the wild food group. Since most fruit was out of season during the survey, the intake was insignificant.

Cereals

Samp, which ranked first in popularity among the Xhosa (data to be published) did not show significant differences in intake when sex-age groups were compared. Therefore samp is not included in Table III.

Stiff porridge in Table III refers to *isitshwala*,¹ and not to the dry crumbly porridge, *uphuthu*. *Umkhupha*, the traditional steamed bread, is the most frequent item in the bread group. It seemed especially to be favoured by females. Of the two drinking cereals, *imbila* (fermented before cooking) and *amarewu* (fermented after cooking), *imbila* is usually more nutritious because unrefined mealie meal or sorghum meal is more often used in the preparation.

Due to the migrant labour of young adult men, 27% of the adult males were between the ages of 16 and 20 years. This influenced the figure for Bantu beer negatively because these subjects were too young to partake intensively in beer drinking. Nevertheless, Bantu beer is the only food group consumed by such a large proportion of adult men when compared with other sex-age groups. This gives more evidence for Bothwell *et al.*'s² suggestion that there is a close relationship between the consumption

TABLE II. COMPARISONS OF THE MAIN FOOD GROUPS

Main food group	% consumers in total sample	% differences		
		C ⁺ / A ⁻	B ⁺ / G ⁻	M ⁺ / W ⁻
Cereals	100,0	0	0	0
Miscellaneous items	97,6			
Vegetables, fruit, legumes	84,5		-12	-16
Meat, milk, eggs, fish	48,7			+17
Wild foods	5,4	+8	+14	

TABLE III. COMPARISONS OF SOME POPULAR CEREAL GROUPS

Food subgroup	% consumers in total sample	% differences		
		C ⁺ / A ⁻	B ⁺ / G ⁻	M ⁺ / W ⁻
Stiff porridge	69,1			+10
Bread	68,4		-7	-16
Amarewu	57,0	-10		
Imbila	52,36			-34
Bantu beer	13,61	-28		+30

TABLE IV. COMPARISONS OF SOME VEGETABLE AND LEGUME GROUPS

Food subgroup	% consumers in total sample	% differences		
		C ⁺ / A ⁻	B ⁺ / G ⁻	M ⁺ / W ⁻
Green leaves (wild)	56,7			-31
Green leaves (cultivated)	41,1			
Beans (dried)	6,4	+7	+5	+4

TABLE V. COMPARISONS FOR MEAT, MILK, EGGS AND FISH

Food subgroup	% consumers in total sample	% differences		
		C ⁺ / A ⁻	B ⁺ / G ⁻	M ⁺ / W ⁻
Meat	48,6			+21
Milk	11,3	+4	+3	
Eggs	3,3	-3	-3	-2
Fish	2,6		-3	-5

TABLE VI. DIFFERENT KINDS OF MEAT AS EATEN ON WEEKDAYS, SATURDAYS AND SUNDAYS

Sex-age groups	Total No. of consumers*								
	Weekdays			Saturdays			Sundays		
	Chicken	Pork	Beef	Chicken	Pork	Beef	Chicken	Pork	Beef
Men	10	2	6	11	5	9	26	8	15
Women	2	5	3	1	6	2	22	7	5
Children†	9,5	7,5	1,5	9,5	9,5	3	21,5	11,5	8

* The total number of subjects who consumed a specific item at least once on a specific day.

† Mean number of boys and girls.

of home-brewed alcoholic drinks (with a high ingestion of iron), and the incidence of liver siderosis which manifests in late adolescence reaches its greatest degree between the ages of 40 and 60 years, and is more severe in males.

Vegetables, Fruit and Legumes

In contrast to the study of Lubbe,³ who found that 93% of a sample of Venda men partook of green leafy vegetables in a 24-hour period, only 40% of our sample of Xhosa men partook of the green leaf group in the course of one week. This could be of importance in view of the incidence of scurvy among adult Xhosa males.

Of value to the nutrition educator is the fact that although considerably fewer men consumed *imifino*, about the same percentage of men as women and children consumed cultivated greens (Table IV). Cabbage is by far the most popular cultivated green vegetable. *Imifino* was consumed by 70% of the women and 57% of the children.

Dried beans mixed with samp are not included in the bean subgroup, since their ratio to samp is very low. Men and children mostly consumed the beans as a soup, mixed with *iinkobe* of mealies or sorghum. (*Iinkobe* is the cooked whole grain.) Women preferred *umqa* of beans (cooked dried beans mixed with mealie meal and cooked into a stiff porridge). Beans can contribute significantly to the protein content of a diet if eaten regularly in *iinkobe* soup. The proportion of *iinkobe* to beans is fairly small.

Meat, Milk, Eggs, Fish

Although eggs were recorded as 'available' by 99% of the Xhosa families in Stott's⁴ study in the Tsolo district, egg is still not a favourite dish. Surprisingly, the small number who *did* consume eggs were mostly female (Table V). A small number of females consumed fish in tinned form. Milk is taken by the majority as *umvubo* (sour milk mixed with dry porridge).

Traditionally, Xhosa men first satisfied themselves with meat, then the women helped themselves, and children got what was left, if any. However, in this survey, the per-

centage of men and children who consumed meat was more or less equal (men 49,6%, boys 43,2%, girls 45,8%).

Table VI reveals that the traditional way of dividing meat holds only for beef. At the time of the survey, chicken and pork were mostly eaten. Noteworthy is the small number of women who consumed chicken on weekdays and Saturdays, while on Sundays chicken was eaten more or less equally by all sex-age groups. For the total sample, mutton ranked fourth and goat's meat fifth in importance, after chicken, pork and beef.

Miscellaneous Items

The most remarkable difference is in the subgroup for soup, which shows a positive difference of 70% when the sample of children is compared with the sample of adults. This is due to the nourishing soup consumed by the children as the result of a school feeding scheme, and shows that the scheme contributed a nutritious product which was not usually included in the family diet.

Wild Foods

This group includes animals, birds and insects, as well as fruit and roots, many of which were not in season at the time of the survey. The number of people who consumed items of wild food is very small indeed. However, these were mostly fruit and roots, consumed by boys when herding the flocks over weekends.

CONCLUSION

This study reveals differences in the eating habits of the various sex and age groups, of sufficient significance to be considered by nutrition educators.

REFERENCES

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3. Lubbe, A. M. (1971): *Ibid.*, **45**, 1289.
4. Stott, N. C. H. (1973): *Ibid.*, **47**, 1507.