**DIE BEHOUDENDE WAARDE VAN 'N SIN VIR HUMOR**

Dit is onvermydelik dat 'n mens daagliks blootgestel word aan baie voorvalle en gebeurtenisse van 'n onaangename en onplesierige aard. Sommige van hierdie dinge wat so met 'n mens gebeur — as gevolg van omstandighede buite jou beheer, maar soms wel ook deur jou eie toedoen — is egter nie net onplesierig van aard nie; dikwels is die gebeure self, of die gevolge daarvan, so ernstig dat dit 'n ongunstige neerslag het op ons geestegesondheid en liggaamlige gesondheid.

Tensy 'n mens dus die nodige geesteskrag het om die onberekenbaarheid van die lewe die hoof te bied, kan klein en minder belangrike gebeurtenisse sulke abnormale afmetinge begin aanneem dat ons ontredderende en ongelukkige mense word. Die belangrike vraag in hierdie verband is dus: waaruit bestaan daardie krag en vermoë wat 'n mens in staat stel om altyd op 'n behoudende en ge­slaagde manier te reageer op die wisselvallighede van die lewe? En verder: is dit 'n krag of vermoë wat aangekweek en doelbewus beoefen kan word?

Die antwoord op hierdie vrae is gelukkig nie te ongunsig nie. Ons kan sonder twyfel verklar dat 'n sin vir humor eintlik op 'n gesonde grond van emosionele volwassenheid berus — en dit kan wel nagestreef en aangekweek word, selfs al is dit nie altyd 'n maklike taak nie.

In die werkelikhed is emosionele volwassenheid 'n eien­skap wat nie as geneem voorkom nie. Daar kan geen twyfel bestaan aan die feit dat die mens oneindig veel vooruitgang gemaak het wat sy verstandelike vooruitgang betref nie. Daarvan getuig al die verbasende tegnieke uit­vindings van die moderne tyd. Maar die maniere waarop die mens toepassing gevind het vir hierdie uitvindings en ontdekking — die gevoelloosheid en wreedheid van mens teenoor mens, die voortdurende bedreiging van oorlog en die nimmereindige geweldwyer om bewapening, die misbruik van atoomenergie vir doeleindes van vernietiging in plaas van vir die planmatige bestendiging van die lewe op 'n meer blywende en beskaafde vlak — die toepassing wat die mens langs die bogenoemde weë gevind het vir die produkte van sy verstandsarbeid, toon vir ons aan in hoe 'n onrussbarende mate daar nog behoefte bestaan aan emosionele volwassenheid.

Die eisenskap van emosionele volwassenheid veronderstel eintlik daardie nodige mate van insig en helderheid van oordeel wat noodsaklik is by suksesvolle aanpassing. En dit is ook hierdie eisenskap — insig en oordeel — wat aan die grond van 'n gesonde sin vir humor lê.

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**THE FIRST YEAR OF LIFE OF THE JOHANNESBURG BANTU**

**II. TRIBAL GROUPS AND NUTRITION**

JOAN GRIFFITHS, M.B., B.CH. (RAND), D.CH., R.C.P.&S. (ENG.), Paediatrician, Johannesburg

I recently found retarded physical development in a sample of Bantu infants in Johannesburg.' This sample included all 4 main groups of the South African Bantu. From the same population Kahn and Freedman selected a group of privileged Bantu children and found that their physical development was comparable with White samples of American children of good economic background.

Recent studies of growth have emphasized the importance of the environment on the development of infants. Greulich has shown that Japanese children born in California are heavier and taller than those in Japan and comparable with White American children.

It was therefore thought to be of interest to compare the tribes in the sample of Johannesburg Bantu infants, in order to discover if any tribe showed physical superiority while living with other tribes in a similar urban environment.
During 1957 and 1958, 1,216 Bantu infants of 1 year or under were medically examined and measured. Seventy-one infants were newly born and were delivered in Baragwanath Hospital, situated between Orlando Township and the City of Johannesburg; 475 infants were living in the municipally-controlled Bantu township of Orlando, and 670 babies were living in Alexandra Township, a residential area for Bantu situated about 8 miles from the centre of Johannesburg, but not controlled by the Johannesburg Municipality.

METHODS

1. Selection of Sample

Only babies whose exact birth-dates were known were used in the sample, and in no case was the mother’s memory relied upon. Twins were excluded.

(a) Newborns. All the babies were born in Baragwanath Hospital, and were examined within 3 hours of birth. If the baby was considered distressed or sick it was not examined, otherwise consecutive births were examined while the examiner was attending daily at the maternity section of the hospital.

(b) Orlando Township. The register of births attended by the district midwifery services was used for obtaining accurate birth dates, and for addresses from which to fetch the babies. Appointments were made at the patients’ homes and, with a very occasional exception, all the mothers who were approached were willing to attend for examination. The babies were fetched by car from their homes, and returned by car after the examination was complete.

(c) Alexandra Township. Approximately half these babies were interviewed and examined while voluntarily attending the infant-welfare clinic run by the Alexandra Health Centre and the University Clinic. Birth dates were checked in the register of the clinic’s district midwifery service, and from this register the addresses were obtained for the rest of the sample, who were babies fetched from their homes and were not necessarily regular infant-welfare clinic attenders.

2. The Examination

All babies were examined, measured and weighed by me personally, with the exception of 64 infants who were seen by another medical officer using the same method and equipment. Items of information from the mothers were obtained by an African graduate assistant using the mothers’ own language. These assistants consciously tried to avoid, by tone of voice, suggesting to the mothers that certain information was, or was not, ‘approved’.

An attempt was made on purely clinical grounds, without knowledge of tribe or diet, to assess the nutritional status of the baby. Kahn’s criteria were chiefly followed:

(a) Excellent nutrition. Where the clinical state was such that it was considered unlikely that the nutrition of the child could be improved by additions to the diet.

(b) Good nutrition. Where it was considered that the clinical state might improve with additions to the diet, the nutrition was judged suboptimal.

(c) Fair nutrition. Where mild signs of malnutrition (atrophic scalp hair, receding hairline at temples, depigmented patches on cheeks, mild cheilosis) and/or rickets were present.

(d) Poor nutrition. Where there were signs of advanced malnutrition (nutritional oedema, nutritional dermatosis, severe muscular wasting); or where the body weight was less than 60% of the expected average weight for height, even though there were no clinical signs of malnutrition (the table of expected average weight for height which was used was given by Evans and MacKeith, adapted from Grandprey’s data given in Brenneman’s book).

3. Age and Race

Age was calculated to the nearest week, midweek cases being assigned alternately to the lesser or greater age. The racial group to which the infant belonged was assessed by allotting the cases according to the language spoken at home; this was not known by the examiner at the time of the examination.

RESULTS

Table I shows the tribal distribution of the babies in the sample, including newborns.

Table II shows the clinical assessment of nutritional status of the sample, excluding newborns. Signs of malnutrition were shown by 13·55%, in that they were classified as ‘fair’ or ‘poor’, while 31·22% were classified as ‘excellent’.

Table III shows the nutritional assessment of those tribes who were represented in the sample in fairly large numbers. Of these, 13·79% showed signs of malnutrition, and 30·32% were classified as ‘excellent’.

Table IV shows the influence of the type of feeding on the nutritional assessment.

Retarded physical development, described more fully elsewhere, was found. The mean stature of the babies was consistently shorter than that in series of American or British White babies. The mean weight of the babies was lighter at birth than that of those in the White series, actually heavier from 4·7 weeks, similar thereafter until 3 months of age, and for the rest of the first year lighter.

DISCUSSION

The numbers of babies in each tribe were not sufficient to construct measurement curves for comparison, so the
TABLE II. CLINICAL ASSESSMENT OF NUTRITIONAL STATUS OF BABIES UNDER 1 YEAR (SEXES COMBINED)

<table>
<thead>
<tr>
<th>Status</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>355</td>
<td>31·22</td>
</tr>
<tr>
<td>Good</td>
<td>628</td>
<td>55·23</td>
</tr>
<tr>
<td>Fair</td>
<td>146</td>
<td>12·84</td>
</tr>
<tr>
<td>Poor</td>
<td>8</td>
<td>0·71</td>
</tr>
<tr>
<td>Total</td>
<td>1,137</td>
<td></td>
</tr>
</tbody>
</table>

TABLE III. NUTRITIONAL ASSESSMENT OF VARIOUS TRIBES

<table>
<thead>
<tr>
<th>Tribe</th>
<th>No.</th>
<th>Excellent</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zulu</td>
<td>341</td>
<td>30·20</td>
<td>56·60</td>
<td>12·61</td>
<td>0·59</td>
</tr>
<tr>
<td>Chauka</td>
<td>114</td>
<td>29·82</td>
<td>53·51</td>
<td>16·67</td>
<td>0·88</td>
</tr>
<tr>
<td>Pedi</td>
<td>139</td>
<td>31·65</td>
<td>51·08</td>
<td>16·55</td>
<td>0·72</td>
</tr>
<tr>
<td>Sotho</td>
<td>182</td>
<td>31·87</td>
<td>53·30</td>
<td>14·83</td>
<td>0</td>
</tr>
<tr>
<td>Shangaan</td>
<td>99</td>
<td>33·33</td>
<td>61·62</td>
<td>4·04</td>
<td>1·01</td>
</tr>
<tr>
<td>Venda</td>
<td>80</td>
<td>22·50</td>
<td>67·50</td>
<td>8·75</td>
<td>1·25</td>
</tr>
<tr>
<td>Xhosa</td>
<td>97</td>
<td>29·90</td>
<td>52·58</td>
<td>16·49</td>
<td>1·03</td>
</tr>
<tr>
<td>Total</td>
<td>1,052</td>
<td>30·32</td>
<td>55·89</td>
<td>13·12</td>
<td>0·67</td>
</tr>
</tbody>
</table>

TABLE IV. RELATIONSHIP OF NUTRITIONAL ASSESSMENT TO TYPE OF FEEDING

<table>
<thead>
<tr>
<th>Type of Feeding</th>
<th>Not assessed</th>
<th>Breast-fed</th>
<th>Partially breast-fed</th>
<th>Artificially fed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Breast-fed</td>
<td>113</td>
<td>47·88</td>
<td>104</td>
<td>44·07</td>
<td>19</td>
</tr>
<tr>
<td>Partially</td>
<td>156</td>
<td>50·00</td>
<td>264</td>
<td>52·07</td>
<td>87</td>
</tr>
<tr>
<td>Artificially</td>
<td>11</td>
<td>3·12</td>
<td>76</td>
<td>58·06</td>
<td>41</td>
</tr>
<tr>
<td>Total</td>
<td>281</td>
<td>32·08</td>
<td>445</td>
<td>50·80</td>
<td>150</td>
</tr>
</tbody>
</table>

clinical assessment of the nutritional state was used. As shown in Table III, there was a marked similarity among the tribes. The X² test was applied with the columns 'fair' and 'poor' combined, and X² = 15·2288, showing no statistically significant difference between the nutritional status of the tribal samples in Table III.

In the sample as a whole, nutritional status deteriorated with age, the older babies showing a lesser incidence of excellent nutrition and a greater incidence of objective signs of early malnutrition. The age composition of the various tribes was similar to the sample as a whole.

Type of feeding also affected the nutritional status in the sample as a whole. Deprivation of breast milk affecting it adversely (Table IV). In assessing the statistical significance of the relation between type of feeding and nutritional assessment, categories 'good' and 'excellent' and categories 'fair' and 'poor' were combined, and the percentages of each category for each type of feeding were calculated. The 95% confidence limits were applied, and in no case did the limits overlap, showing that the percentages differed significantly. Unfortunately, the incidence of breast feeding in the various tribes could not be compared with the general sample, since there were insufficient data. The finding among the Johannesburg Bantu that breast-fed babies do much better than artificially fed ones is different from recent experience in England. In English samples there is little difference between the weights of breast- and bottle-fed babies in the early months, but later the bottle-fed babies are heavier. Also, Hammond observed no consistent differences up to the age of 1 year between the weight gains of children of the various social classes.

It will be noticed that nutritional-status assessment was made on objective signs in the categories 'fair' and 'poor', but were largely subjective in the categories 'good' and 'excellent'. Many babies whose nutritional status was assessed as 'good' because there were no objective signs of early malnutrition, were felt by the examiner not to warrant this adjective. Such babies may have had the 'first grade malnutrition' of Gómez and his colleagues. Those categorized as 'fair' were babies with borderline undernutrition and would certainly fit into the category of 'first-degree' and many probably into 'second-degree' malnutrition, or would variously be termed having 'mild protein malnutrition', or 'pre-kwashiorkor'. Such cases have been much less studied than frank kwashiorkor, which is the final stage.

It was not possible during this stage of the research project to carry out serum-protein estimations or other tests to confirm the clinical evidence of early malnutrition. The team working in the Bantu area was anxious to promote goodwill, and getting samples of venous blood was thought likely to antagonize parents. Judging by the acquiescence with which mothers accepted invitations to come for examination, the research clinic had a good team of the National Institute for Scientific and Industrial Research. I thank Dr. S. Biesheuvel, Director of the Institute, and his staff (especially Mr. R. S. Hall) for statistical help, and Dr. Katherine Cobb of New York for her inspiring assistance at the initiation of the project.

My thanks are due to Dr. D. W. P. Laverly, Senior Obstetrician, and Dr. I. Frack, Superintendent of Baragwanath Hospital, for permission to work in the labour wards there.

SUMMARY

The tribal groups in a sample of Bantu infants are compared by assessment of nutritional status, and do not differ significantly from each other. If the nutritional status of the babies on different types of feeding is compared, however, there is a significant difference.

The sample showed retardation of growth and it is concluded that this is unlikely to be the result of racial or tribal factors.

Data were collected during a study on growth and development of the urban Bantu infant in 1957-1958 by a research team of the National Institute for Personnel Research, Council for Scientific and Industrial Research. I thank Dr. S. Biesheuvel, Director of the Institute, and his staff (especially Mr. R. S. Hall) for statistical help, and Dr. Katherine Cobb of New York for her inspiring assistance at the initiation of the project.

REFERENCES