

THE INTER-RELATIONSHIP OF MENTAL
CAPACITY, PHYSIQUE, AND HOME
ENVIRONMENT OF SCHOOL CHILDREN

by

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THE INTER-RELATIONSHIP OF MENTAL CAPACITY,
PHYSIQUE, AND HOME ENVIRONMENT OF
SCHOOL CHILDREN.

INTRODUCTION.

In medical circles at the present time it is commonly agreed that the standard of child health is steadily increasing and that the average child to-day is much better developed and healthier than his predecessors of the last generation. It is also an undoubted fact that the general standard of housing, from the point of view of health, has improved enormously within the last twenty to thirty years. At the same time there is constant complaint from those who are interested in educational matters that the present day child cannot compare with his predecessors as regards his mental ability. They say that 'bright' children are now rarities, whereas the percentage of 'dull' children is increasing steadily. Certainly the increasing number of children certified as mental defectives would tend to support this attitude.

Can it be that mental capacity and physique are quite independent of one another? Has better housing a beneficial effect on physique but none on mentality? What are really the potent factors governing the development of the child?

The following investigation seeks to elucidate this and to study the inter-relationship of these various factors, together with some others which might modify or alter their effects.

LOCUS AND SCOPE OF ENQUIRY.

The children dealt with were attending the schools in the Burghs of Falkirk and Stirling where the population is mostly industrial, almost 86 per cent of the parents being engaged in manual occupations.

Two groups of children were taken (a) born in 1918, (b) born in 1922. This gave a group of children of approximately nine years of age, numbering 955 cases and a group of slightly over thirteen years of age, numbering 683 cases. The nine years group comprised 479 boys and 476 girls and the thirteen years group 346 boys and 337 girls. The age distribution in these groups is shown in Table 1.

Each age group was divided according to the Mental Capacity of the children and each division compared as regards Attendance, Nutrition (judged by height and weight in relation to sex and age), Physical Defects, Hours in Bed per Night, Employment out of School Hours, and Home Environment (judged by size of house, persons per apartment, occupation of parent, cleanliness and clothing of child) and the effects of these items on one another investigated. A house to house visitation was carried through in selected cases still further to investigate the Home Environment especially as regards Income and the method of its expenditure and Maternal Efficiency. The relationship of Mental Capacity to Intelligence was tested, and a later study was made of the effect of Re-housing on the Physique of some of the Slum Children dealt with.

MENTAL CAPACITY.

In sub-dividing the children as regards mental capacity, by which is understood the sum of intelligence and ability to acquire knowledge, four divisions were made in each Age Group, namely, Advanced, Normal, Retarded, Very Retarded.

In ascertaining to which division the child belonged, two factors were taken into consideration. Firstly - whether or not the child was fit to do the work of its school class. In this estimation valuable assistance was given by the teachers and headmasters. Secondly - whether the child was the correct age for that class. There is a nominal age of entry for each class and an allowance of six months was made on either side of this as the limit of normality. If a child was the correct age for its class and able to do the work of the class it was classified "normal". If it was the correct age but unfit for the work of the class, then it was classified "retarded" or "very retarded" according as it was fit for a class one or two stages lower. Children of age for the normal class but placed in lower classes were similarly graded. If a child was in and fit for the work of a class which it should not have entered for another six months or a year, or in the normal class and fit for the work of an advanced class, then it was classified "advanced". The numbers of cases resulting in each Division are shown in Table 2.

While there is a greater spread presented by the XIII. years group, a larger proportion of the children being either above or below normal, this is wholly accounted for, I think, by the fact that the extra four years gives time for a more thorough winnowing of the wheat from the chaff. There is also quite a marked tendency for the girls to find their way into relatively more advanced classes than the boys.

FACTORS RELATED TO MENTAL CAPACITY.

A. SCHOOL ATTENDANCE.

In taking out the figures for attendance, loss of attendance during any part of the school career was counted and three classes of children were included - (1) those going to school late, (2) those changing school during their "primary" career, (3) irregular attenders in the commonly accepted sense. In the XIII. years group owing to want of information regarding attendance in early school years, a large number of cases had to be omitted. The figures relative to irregular attenders are given in Tables 3 and 3a.

It is, of course, the case that with the above classes included, the greatest amount of irregularity is bound to occur during the early years of the school career and the IX. years group figures would appear to show that the position of the child in school suffers materially during this period, a much greater percentage of irregular attenders falling into the retarded divisions. By the time the age of XIII. years is reached there has been an opportunity to make up the lost ground, and the irregular attenders are more evenly spread over the four divisions. Irregular attendance seems to be associated with only slight retardation in girls, while boys show marked retardation. Girls show a greater percentage of irregular attenders than boys in the IX. years group but the reverse is the case with the XIII. years group.

FACTORS ASSOCIATED WITH IRREGULAR ATTENDANCE.

(a) Home Environment.

(1) Size of House. Children from one apartment houses show much the largest percentage of irregular attenders (Table 4). They also show as we shall see (Table 29a) a markedly increased percentage number of cases in the very retarded division of the XIII. years group. But in the case of the irregular attenders, it is the IX. years group which shows the most marked retardation.

The /

The association of retardation with irregularity previously noted (p.7) is therefore not due to the increased proportion of children from this size of house among the irregular attenders. There is an increased proportion of irregular attenders in houses of over four apartments due to the large proportion of professional workers' children from this type of house (Table 31)

(2) Number of Persons per Apartment. There is a steadily increasing percentage of irregular attenders among children from increasingly overcrowded houses in the IX. years group, but no constant increase in the case of the XIII. years group (Table 5). Comparing the distribution with that for all children (Tables 5 and 33) we see that 42.3 per cent of IX. years group irregular attenders come from houses with over two persons per apartment as compared with 38.7 per cent for the whole group and 32.9 per cent of XIII. years group irregular attenders as compared with 35.1 per cent for the whole group. That is to say, the percentage from overcrowded houses is greater in the group where the retardation is greater. It has been noted previously (p.6) that in the XIII. years group the irregular attenders are more evenly spread over the mental capacity divisions than in the IX. years group. If however these irregular attenders are sub-divided into those from houses with two or less persons per apartment and those from houses with more than two, it is found that while in the IX. years group they have a similar mental capacity distribution, in the older group the children from the more crowded houses are very much more retarded, 7.3 per cent being found in the advanced division and 20 per cent. in the very retarded as against 17.9 per cent advanced and 10.6 per cent very retarded for the better housed children (Table 6). Children from good houses, it would appear, are able to make up for loss due to irregular attendance, while children with bad home conditions cannot.

(3) Occupation of Parent. Here we find (Table 7) that the percentage number of irregular attenders among manual workers' children is very little more than that among sedentary workers' children/

children and much less than that among the children of professional workers. In the IX. years group 86 per cent of the irregular attenders are manual workers' children and in the XIII. years group 83.2 per cent so that these have a preponderating influence, but even comparing the mental capacity distribution of manual workers' children alone (Table 34a) with that of irregular attenders (Table 3a) we see that the latter still have an increased percentage of cases in the retarded divisions. The retardation of the irregular attenders is therefore not due to the large proportion of manual workers' children among them and so the effect of parents' occupation can also be excluded.

(b) Nutrition.

Poorer nutrition of irregular attenders might account for the increased numbers in the lower divisions since poorly nourished children are more prevalent in these divisions (Table 9) but the average heights and weights of irregular attenders (Table 19) are found to be very similar to those of other children (Table 19a).

(c) Physical Defects.

One might expect that irregular attenders would show a larger proportion of cases with physical defect and this is actually the case, 71 per cent of IX. years group irregular attenders having one or more physical defects as against 68.9 per cent for the whole group, and 63.5 per cent of XIII. years group irregular attenders as against 58.1 per cent for the whole group (from Tables 21 and 20). It is to be noted however that the difference is greater in the XIII. years group while the retardation of irregular attenders is most marked in the IX. years group. Physical defects would seem therefore not to be the cause of the increased retardation of the irregular attenders.

It is therefore the increased irregularity in itself which is the principal cause of the larger percentage of irregular attenders being in the retarded divisions, and it is evident that a child's position in school cannot be taken alone as a reliable index of its mental capacity, especially in the earlier years.

B. NUTRITION.

The factors dealt with here, viz., height and weight have to be judged in relation to the age and sex of the children concerned. To facilitate comparisons, use is made of standard heights and weights (Table 8) based on the Final Report of the Anthropometric Committee of the British Association, Tables XVI. and XVII. of which show the average stature (without shoes) and Tables XVIII. and XIX. the average weight (including clothes) at all ages, of different classes of the population of Great Britain.

Tables 9 and 9a deal with the average ages, heights and weights for the boys and girls examined in the various mental capacity divisions. With the exception of the XIII. years advanced division girls there is a steady decline in both height and weight from advanced division to very retarded.

FACTORS ASSOCIATED WITH NUTRITION.

(a) Home Environment.

(1) Size of house. There is a steady decrease in height and weight with decrease in number of apartments from over four down to one, amounting to the very striking figures in the case of the XIII. years group boys of no less than 3.8 inches and 16 lbs. and XIII. years group girls of 4.1 inches and 16.4 lbs. (Tables 10 and 10a). This is probably largely due to the greater proportion of better nourished sedentary and professional workers' children (Table 15a) in the larger size of house (Table 31).

(2) Number of Persons per apartment. The figures relative to this are given in Tables 11 to 13a. From Table 12a we see that, with the exception of the IX. years group boys advanced division, the children from houses with more than two persons per apartment are both smaller and lighter than children from houses with two or less than two persons per apartment. Limiting ourselves to manual workers' children (since the better nourished sedentary and professional workers' children are nearly all to be found /

found in the uncrowded houses) we still obtain the same result (Table 14) the deficit being especially marked in the case of the girls.

Also, with the exception of the IX. years group boys, children both from houses with more than two and with two or less than two persons per apartment show roughly the same decline in height and weight from advanced to very retarded division (from Table 12a). But in the IX. years group there are 32.1 per cent of advanced division children, 39.3 per cent normal, 38.9 per cent retarded and 50.0 per cent very retarded in houses with more than two persons per apartment, while in the XIII. years group there are 30.1 per cent in the advanced division, 31.8 per cent normal, 36.4 per cent retarded and 52.6 per cent very retarded (from Table 33). It would appear therefore that the increased percentage of cases in the retarded divisions in the case of children from overcrowded houses (p.20) is due rather to the poorer nutrition than the overcrowding in itself. This is borne out by a study of children from houses with more than three persons per apartment (Table 13a). Making allowance for greater irregularity due to the smaller numbers dealt with, the heights and weights are even further below those of children from houses which are not overcrowded, than we have seen the heights and weights of children from houses with more than two persons per apartment to be, and they also show the same fall with fall in mental capacity division. The much larger percentage of children from houses with more than three persons per apartment in the very retarded divisions as compared with children from houses with more than two persons per apartment (Table 33a) is therefore probably due to their poorer nutrition also.

(3) Occupation of Parent. The figures relative to this are given in Tables 15 and 15a). The children of sedentary workers are seen to be taller and heavier than the children of manual workers but smaller and lighter than the children of professional workers /

workers. Since manual workers' children form the greatest proportion of the total cases, they will have a preponderating effect on the mental capacity distribution. Let us then examine the relationship of nutrition and mental capacity in their case.

We find on the whole (Table 16a) a similar decrease in nutrition with descending mental capacity division though the absence of the better nourished sedentary and professional workers' children from the higher divisions is evident, the average heights and weights there being less than when they are included. Also the poorer nutrition of the XIII. years group advanced division is more marked. The probable explanation of this is that these manual workers' children are of the studious type which does well mentally at the expense of the general physical nourishment. The general decline noted previously (p.10) is therefore accentuated but by no means entirely caused by the larger proportion of poorer nourished manual workers' children in the retarded divisions (Table 34a).

(b) Physical Defects.

There appears to be very little difference between the nutrition of children with physical defects (Table 17) and others (Table 9). As would be expected owing to a proportion of the better nourished children being retarded through their physical defect the decline in height and weight from advanced division to the very retarded division is not present in this case (Table 17a).

(c) Employment out of School Hours.

Comparing the nutrition of employed boys with that of manual workers' boys, from which class 97.5 per cent of the employed boys are drawn, it is seen that it is quite up to standard (Table 18a). It is noteworthy however that where the excess of employed boys from overcrowded houses is greatest the height and weight deficit is greatest and vice versa (Tables 28 and /

and 18a). Once again then, we see that overcrowding is intimately related to height and weight. We may also conclude that employment out of school hours is not in itself detrimental to satisfactory nutrition.

(d) Attendance.

Tables 19 and 19a give the figures relative to the nutrition of irregular attenders. There would appear to be very little difference between the nutrition of irregular attenders and others.

C. PHYSICAL DEFECTS.

The physical defects noted were defective vision, enlarged tonsils, adenoids, anaemia and functional cardiac defect, otorrhoea, defective hearing or speech, pulmonary defect and organic cardiac defect. In order to obtain a proper estimate of the effect of each physical defect, only children suffering solely from the defect to be investigated were noted in each category, e.g. where a child had both defective eyesight and defective speech, it was included in neither category.

Taking firstly all cases with one defect, the increased percentage number of cases, compared with all children in the respective groups, appears, in the IX. years group, in the advanced division, and in the XIII. years group in the retarded divisions (Table 20a). In the latter case, however, it is very slight. If we take all cases with one or more physical defects an increase in the retarded divisions appears in both groups and is more accentuated in the XIII. years group. It would seem therefore that while one physical defect is insufficient to cause retardation, the combined action of several may tend to do so.

INDIVIDUAL DEFECTS.

(1) Vision. The vision recorded was that with glasses in the case of children who were in the habit of wearing them. Children with slight defect, i.e. vision 6/9 or 6/12 Snellen, show very little difference in distribution from all children examined in the IX. years group, but in the XIII. years group they preponderate in the retarded divisions. In the case of marked defect of vision, children with vision 6/18 Snellen or worse in one or both eyes, there is a marked increase in the percentage numbers in the retarded divisions in both age groups (Table 20a).

(2) Enlarged Tonsils. In the case of enlarged tonsils, there is an increased percentage number of cases in the advanced division /

division (Table 20a).

(3) Anaemia or Functional Cardiac Defect. Here there is again an increase in the percentage number of children falling into the higher divisions (Table 20a).

Unfortunately, owing to the small number of cases available with one defect alone no conclusions could be drawn from the figures relating to the other defects.

FACTORS ASSOCIATED WITH PHYSICAL DEFECTS.

(a) Attendance.

The increased percentage number of cases in the retarded divisions among children suffering from one or more physical defects might be explained by the slightly increased percentage of irregular attenders among these children (Table 21a). If however we examine the distribution of regular attenders with one or more physical defects, the retardation is found still to be present (Table 22a). The same result is found in the case of children with defective vision. Children with enlarged tonsils show a decreased percentage number of irregular attenders but again the mental capacity distribution is similar for regular and irregular attenders. No inferences can be drawn from the figures dealing with children suffering from anaemia or functional cardiac defect.

(b) Nutrition.

We have already noticed (p.12) that there is no appreciable difference between the nutrition of children with physical defect and others.

(c) Home Environment.

(1) No. of persons per apartment. There is an increased percentage of cases with one or more physical defects from overcrowded houses in the XIII. years group where the retardation is most marked, (Table 21a). Cases with one or more physical defects who come from houses which are not overcrowded however show a similar retardation (Table 23a). Similar findings occur in /

in the case of children with defective vision. Children with enlarged tonsils show, on the whole, a decreased percentage number of cases from overcrowded houses, but the distribution of cases from houses which are not overcrowded is again similar to that for all cases. No inferences can be drawn from the figures relative to children suffering from anaemia or functional cardiac defect.

(2) Occupation of Parent. Physical defect is more marked in manual than in sedentary and in sedentary than in professional workers' children (Table 24a). In the IX. years group, 88 per cent of the children with one or more physical defects come from manual workers' homes and in the XIII. years group 87.7 per cent. We may therefore compare the group category percentages of the children with one or more physical defects (Table 20a) with those of manual workers' children alone (Table 34a) but even then there is still an increased percentage number of the former in the retarded divisions in the XIII. years group.

The incidence of defective vision is least among professional workers' children especially in the XIII. years group, probably due to a larger proportion of these children being fitted with suitable spectacles (Table 24a). The incidence of enlarged tonsils among manual, sedentary and professional workers' children appears, with the figures available, to increase among what we might expect to be the better nourished children. This agrees with the findings of Table 25 as regards girls but not boys. The small number of XIII. years group professional workers' children with enlarged tonsils, is probably due to this group receiving more prompt medical attention. In the case of anaemia or functional cardiac defect, the figures dealing with parents' occupation might show very little difference for the three classes in a sufficiently large series, but it is interesting to note in passing that the incidence, as found, resembles that in the case of enlargement of tonsils.

D. HOURS IN BED EACH NIGHT.

An attempt was made to ascertain this by getting from each child the hour of going to bed and the hour of rising. It is almost certain that the answers given cannot be strictly relied upon.

There would appear to be only a few minutes difference between the average times in bed for manual, sedentary and professional workers' children and between children from non-overcrowded and overcrowded houses. The time spent in bed appears to be unrelated to the mental capacity of the child. Employment out of school hours reduces the time spent in bed each night (Table 26). It should be noted that the time spent in bed is not synonymous with the hours of sleep as in an overcrowded or one-apartment house the hours of sleep are much less.

E. EMPLOYMENT OUT OF SCHOOL HOURS.

This includes employment either before or after school hours or both. There is a greater percentage of employed children in the lower divisions of the XIII. years group than there is in that group as a whole (Table 27). Comparing employed boys with all boys, the difference is not quite so marked but still perfectly definite. The fathers of 97.5 per cent of the employed boys are manual workers and the remaining 2.5 per cent sedentary workers. Comparing our figures then with those for the boys of manual workers, we see that although there is a greater percentage in the retarded division, there is a smaller percentage of employed boys in the very retarded division.

FACTORS ASSOCIATED WITH EMPLOYMENT OUT OF SCHOOL HOURS.

(a) Attendance.

The percentage number of irregular attenders among employed boys is 24.0 compared with 30.7 for all XIII. years group manual workers' boys, so this would help to explain the greater number in the retarded division and small number in the very retarded.

(b) Nutrition.

We have already noted (p.12) that the nutrition of employed boys is quite up to the average standard.

(c) Home Environment.

The distribution of the boys over the various sizes of house, differs very little from that of all boys, so that this can be neglected. 40.2 per cent of employed boys come from houses with more than two persons per apartment compared with 37.7 per cent in the case of all XIII. years group manual workers' boys (from Table 28).

(d) Physical Defects.

56.8 per cent of employed boys have one or more physical /

physical defect compared with 58.9 per cent of similar manual workers' boys.

(e) Hours in Bed each Night.

We have already noted (p.17) that these are less in the case of employed children.

Taking these facts into consideration we may conclude that employment out of school hours in itself does not cause retardation.

F. HOME ENVIRONMENT.

(1) Size of House.

The evident tendency is for an increased percentage of children from the smaller sized houses to fall into the very retarded division (Table 29a). This gradation is very marked in the XIII. years group, and is in striking agreement with the corresponding steady increase in overcrowding as the number of apartments in the house diminishes (Table 30). A larger proportion of manual than of sedentary or professional workers lives in the smaller number of apartments house (Table 31), thus leading to the increased overcrowding found in the homes of manual workers' children (Table 32).

(2) Number of persons per apartment.

The minimum standard for overcrowding was taken as more than two persons per apartment, children fourteen years of age or less being counted as .5. It was because of this latter fact that the rather strict figure was adopted. Table 30 gives the percentage numbers of houses of the various sizes which show overcrowding on the minimum standard.

In order to discover if overcrowding had any effect on mental capacity, the children were divided into three categories - those from houses with more than three persons per apartment, those from houses with more than two persons per apartment (this includes the first category) and those from houses with two or less than two persons per apartment.

The notable feature is that in the XIII. years group children from the more overcrowded houses show a smaller percentage in the advanced division and a larger percentage in the very retarded divisions than do children from the less overcrowded houses, who, in turn, show a greater proportion of retarded cases than do children from houses which are not overcrowded (Table 33a). In the IX. years group there is an increased percentage of children from houses with more than three persons per apartment in /

in the advanced divisions as well as the retarded divisions. This may result from a number of children from this type of house being sent to school at an earlier age and so gaining a lead from their fellows.

(3) Occupation of Parent.

We find that there is a larger percentage of the manual workers' children in the lower divisions, that an increased proportion of children of sedentary workers are advanced pupils, and that the children of professional workers cluster round the normal and retarded divisions (Table 34a). Since there is 11.5 per cent of sedentary workers' children and no professional workers' children in overcrowded houses, this would seem to show that overcrowding is not the sole agency at work. Even the increased amount of irregularity of attendance among professional workers' children (Table 7) scarcely gives a satisfactory explanation for their relative retardation.

(4) General Cleanliness and State of Clothing.

Relatively few children had insufficient clothing, most of the defects being due to lack of care and general uncleanliness.

Children who are clean and have good clothing show an increased percentage number in the advanced division while a larger proportion of dirty, poorly clad children is found in the retarded divisions (Table 35a).

As might be expected, there is a much larger percentage of unclean children among those from the small overcrowded houses, and a correspondingly larger percentage of uncleanliness among manual workers' children than among those of other workers (Tables 36, 37a). There is also a close association between uncleanliness and irregularity of attendance (Table 21a). The figures showing the percentage of overcrowding in the homes of the children in the three cleanliness categories are also given in Table 21a.

Uncleanliness /

Uncleanliness and poor clothing is, of course, more marked in the IX. years group than in the XIII. years group where the children are beginning to take a certain amount of pride in their personal appearance.

FACTORS ASSOCIATED WITH HOME ENVIRONMENT.

(a) Attendance.

We have noted previously (p.7) that irregular attenders are more frequent in one and over four apartment houses, but that, and especially, in the XIII. years group, only those from the smaller, overcrowded houses are markedly retarded. While then the presence of these irregular attenders might help to explain the retardation in the one apartment house cases it cannot do so for the two and three apartment house children (Table 29a). Thus irregularity of attendance does not appear to be the vital factor in fixing the mental capacity distribution here.

(b) Nutrition.

We have already noted (p.11) that the poorer nourished children are found in the smaller more overcrowded houses, largely inhabited by manual workers, and that the mental capacity distribution appears to be associated not so much with the overcrowding as with the nutrition of the children.

(c) Physical Defects.

In the IX. years group manual workers' children show 70.0 per cent with one or more physical defects, sedentary 65.0 per cent, professional 51.9 per cent, while in the XIII. years group the figures are 60.7 per cent, 48.8 per cent, 37.5 per cent respectively, but although physical defect does cause retardation (p.14), the increased percentage of sedentary workers' children in the advanced division shows that its effect may be neglected here.

FURTHER INVESTIGATION INTO HOME ENVIRONMENT.

For this purpose ten boys and ten girls whose parents were /

were manual workers were chosen at random from each of the four mental capacity divisions in each age group, giving 160 children in all. Manual workers' children were taken in order to eliminate as far as possible the effects of varied size of house and of parent's occupation. Equal numbers were taken from the various mental capacity divisions in order to eliminate the variation in nutrition which we have previously noted to be associated with varying mental capacity. In each house information was obtained as to the household income, the rent and taxes paid and the amount of milk consumed. The size of house and number of inhabitants were already known. An estimate was also made of the maternal efficiency as judged by the cleanliness and general care of the house and inhabitants.

(5) Income.

In fixing the income the approximate average income over the previous two years was taken as in many households the periodic variation was very great. The families were divided into three categories, those with incomes of 7/5 or less per person per week, those with 7/6 to 12/5, and those with 12/6 or more. Children were counted as whole units in arriving at the number of persons in the family.

There is found to be a slight improvement in nutrition with increase in income per person in the case of the IX. years group, but not consistently in the XIII. years group (Table 38). The greater the income per person, the fewer the number of persons per apartment (Table 39) and the greater the amount of milk consumed per person (Table 40).

(6) Rent and Taxes.

The amount paid in rent and taxes was not taken as giving an indication of the type of house inhabited. What was desired was the proportion of Income thus expended. The families were divided according to whether they spent up to 10 per cent of their income, or more than 10 per cent of their income in this way. The result found is that those with the greater /

greater proportional expenditure are also the families where the children are the better nourished (Table 41). Where the proportion spent in rent and taxes is greater however the overcrowding is less (1.7 compared with 2.4 persons per apartment) even although the income per person is also less (9/9 as against 10/10).

(7) Milk Consumption.

The milk consumption was taken as an indication of the food supply and was stated as pints per person per week. We have already noted (p.23) that the consumption is found to be greater where the income per person is greater. It is also shown (Table 42) that except in the case of the XIII. years group boys, the greater the consumption the better the nutrition of the children.

(8) Maternal Efficiency.

It is seen that the efficiency of about 28 per cent of the mothers was considered unsatisfactory (from Table 43). With the exception of the XIII. years group boys, where the nutrition is the same, the nutrition of the children with inefficient mothers is below that of other children (Table 43). The weekly income per person, the amount of milk consumed per week and the proportion of income expended on rent and taxes are less in the case of the inefficient mother's households. (Table 44). This agrees with the previous finding of an association between the decreased expenditure on rent and taxes and poor nutrition of the children. There is also an association between inefficiency of the mother and overcrowding of the home, there being 2.5 persons per apartment in the case of inefficient mothers and 1.8 persons per apartment for others.

(9) Mental Capacity.

As regards the mental capacity of the children, the only constant relationship apparent is with the average income per adult in the household (Table 45). This, of course, is a better /

better indication of the social level of the parent than the income per person, but it is doubtful if it can be taken as indicative of the mental capacity of the parent because it depends very largely on other influences such as the number of young adults in the household and the physical fitness of the parent.

MENTAL CAPACITY AND INTELLIGENCE.

We have seen that because of the effect of irregularity of attendance, a child's position in school cannot be taken alone as indicating its mental capacity (p.9). In the case of regular attenders however it may be. In studying the relationship between mental capacity and intelligence a number of regular attenders chosen at random from each mental capacity division in each school, but with approximately equal number of boys and girls, were tested by means of the Stanford Modification of the Binet Simon Mental Tests. In the IX. years group twenty boys and twenty girls and in the XIII. years group nine boys and eleven girls were taken as representative samples.

A steady decline in the average intelligence quotient for each mental capacity division from advanced down to very retarded is found (Table 46) and it would appear that with regular attenders, grouping according to mental capacity is the same as grouping according to intelligence. There is however a fair proportion of exceptions, so that, as in the other parts of the investigation, the general findings cannot be applied to particular individual cases.

The average intelligence quotients of eighteen boys and eighteen girls drawn in equal numbers from the various mental capacity divisions in the IX. years group are 96.1 and 96.7, so that it is not a marked difference in intelligence per se which causes an increased proportion of girls to be found in the more advanced classes in school.

EFFECT OF RE-HOUSING ON THE PHYSIQUE OF SLUM CHILDREN.

In order to ascertain whether the poorer nutrition of the children from unhygienic, overcrowded slum properties was due in any great measure to the type of home, the heights and weights of twenty boys and nine girls in the IX. years group were taken again two and a half years after the original measurements. Of these boys and girls, all the girls and ten of the boys had been rehoused in Council houses for a period of one to two years and the other ten boys had been rehoused for a period of two to two and a half years. A similar number of controls of the same sex and approximately the same age and nutrition who lived in similar conditions and who still remained in the slums were also carefully selected and their measurements re-taken.

There was found to be no appreciable benefit in nutrition in the case of the re-housed children (Table 47).

SUMMARY.

The children included in the Investigation were 479 boys and 476 girls of approximately nine years of age and 346 boys and 337 girls of approximately thirteen years of age.

Irregularity of attendance caused retardation in school especially in the case of boys, and was most marked among professional workers' children and children from overcrowded houses. Owing to this irregularity a child's position in school could not be taken alone as an index of its mental capacity.

Children from smaller sized or overcrowded houses, largely inhabited by manual workers, were frequently dirty and poorly clad, and were in marked excess in the retarded divisions, while children who were clean and had good clothing preponderated in the advanced division. The retardation might be negatived to a certain extent by the earlier age of entry to school of children of this type. The active factor appeared to be the poorer nutrition.

There was a larger percentage of manual workers' children in the lower mental capacity divisions, while an increased proportion of children of sedentary workers were advanced pupils and the children of professional men clustered round the normal and retarded divisions. There was a marked tendency for girls to find their way into relatively more advanced classes than boys.

There was a steady decline in nutrition with descending mental capacity, except in the XIII. years group advanced division, where the girls were not increased in height and weight over their fellows. Children of sedentary workers were taller and heavier than children of manual workers but smaller and lighter than those of professional workers, i.e., height and weight figures varied according to the number of apartments in the home, or, more exactly the degree of overcrowding.

Irregular /

Irregular attenders, children with physical defect, and children employed out of school hours, were as well nourished as their fellows.

Maternal efficiency, income per person, nutrition of the child, and milk consumpt varied directly with each other and inversely with overcrowding. The proportion of income spent in rent and taxes varied directly with maternal efficiency and nutrition but inversely with overcrowding and income per person. Maternal efficiency appeared to be more closely allied to the physical and hence the mental welfare of the children than any of the other factors investigated.

Physical defect was more marked in manual than in sedentary and in sedentary than in professional workers' children. While one physical defect as a rule was insufficient to cause retardation, the combined action of several might do so. Children suffering from defective vision (uncorrected) were retarded in school. Enlargement of tonsils and anaemia or functional cardiac defect apparently did not affect the position in school.

It did not appear that transferring children from slum areas to good housing conditions did in itself improve their physical development.

Employment out of school hours did not cause retardation, though it reduced the numbers of hours in bed per night.

With regular attenders, grouping according to mental capacity was the same as grouping according to intelligence.

These general results cannot be applied to individual cases.

CONCLUSIONS.

In the present investigation 5.5 per cent of nine year old children and 11.1 per cent of thirteen year old children were found to be more than one year retarded in school. This seems a big increase at the later age, but is really what one might expect. As was stated in the Report of the Mental Deficiency Committee (Pt.II. p.149), "children as they grow older diverge more and more the one from the other; the child who is backward by one year at 5 years of age is likely to be backward by two years at 10 years and by three years at 15 years".⁽¹⁾

As regards the average percentage number of retarded children, the figures agree fairly well with previous observers. In the same Report (Pt.II, p.91) it is stated that "10 per cent of children attending Public Elementary Schools are two or more years retarded educationally". The same percentage is given by Sir George Newman in 1921. With other investigators, the percentage varies from 7 to 19 depending very largely on the social class of scholars tested. Warner gives it as varying from 5.7 in the upper classes to 7.3 in the poorer classes. The Royal Commission on Physical Training (Scotland) (App. pp.79 and 105) gives 9 per cent in Aberdeen and 12 per cent under the more industrial conditions of Edinburgh. In the poorer schools in Edinburgh the figure rose as high as 19 per cent. The Mental Deficiency Committee in their Report (Part IV. p.129) state that "approximately 25 per cent of feebleminded children live in 'very poor' homes". Habakkuk (p.316) states that 20 per cent of boys and girls fall into the 'backward' category. It is therefore a grave problem.⁽²⁾⁽³⁾⁽¹⁾⁽⁵⁾

In the present investigation girls were found to be less retarded than boys, and this has not been a common finding. Both the Charity Organisation Society and the Royal Commission on /⁽⁴⁾

(3)
 on Physical Training (Scotland) found the reverse, but the
 Mental Deficiency Committee state (Pt.IV. p.65) that "the inci-
 (1)
 dence of feeblemindedness is 14 per cent higher in boys than
 in girls", and this therefore supports the present findings.
 They also state that girls develop mentally more quickly than
 boys during the first decade while the converse is true during
 the second decade.

(6)
 Sir George Newman states that the percentage of
 mentally dull children is considerably larger among mal-nourished
 children than among children generally (p.24) and quotes (p.96)
 the case of Leeds where it was shown that the physique of boys
 suffered much more severely from the effects of poverty than the
 physique of girls. Similar results regarding physique and
 intelligence have been found by many other observers (8),(9),(10),
 (11),(12),(13),(14),(19)

. Others have merely investigated the
 relationship with height, and found it to correspond (15),(16)
 Contrasting with this, the Royal Commission on Physical Training
 (3)
 (Scotland) did not find any correlation. The present investiga-
 tion shows very striking figures in proof of the relationship.

The nutrition of the child is closely related to many
 factors. Numerous observers (13),(17),(18),(19),(20),
 have shown
 that it is closely associated with the number of rooms in the
 home and consequently with overcrowding. Other investigators
 (3),(4)
 have found the figures not so convincing and clear cut,
 and varying at different ages, but both the above observers and
 many more (2),(22),(23),(24),(25),(26)
 are agreed that there is a
 close relationship with the poverty of the home.

As against this Miss Elderton, studying mortality
 rates, finds that in infants it is the health and habits of the
 parents which have the greatest influence, rather than the act-
 ual environmental conditions, and this view is rather supported
 (22)
 by the Work of Paton and Findlay and the Mental Deficiency Com-
 (1)
 mittee. The association of maternal efficiency with increased
 income /

income, decreased overcrowding and better nutrition of the family (22) has also been noted by Paton and Findlay in the case of young children but their figures did not show such a close relationship as in the present investigation, except as regards overcrowding. (31) Hughes and Roberts found a more marked direct association between maternal efficiency and income.

It has been generally agreed that physical defect is more common among educationally retarded children (1),(4),(10), (28)

. The present investigation agrees with this in the case of defective vision, but not in the case of anaemia or functional cardiac defect, or enlarged tonsils. The Medical Officer of Education to London County Council found (16) that children with enlarged tonsils probably had poorer nutrition than others, but (3) Arkle found that adenoids and enlarged tonsils are less prevalent in the poor districts than in the better districts. The latter would agree with the present findings that children with enlarged tonsils are probably better nourished than their fellows.

The general finding that uncleanness is also more prevalent among the poorer and less intelligent children (3),(4), (27) is again emphasised.

That improved housing will not in itself improve the health of the community has been shown by G.C.M.McGonigle (32) in investigating the mortality rates for a re-housing area in Stockton-on-Tees and this would support the findings in the case of the re-housed children in the present investigation.

Returning finally to the three questions put forward at the opening of this study (p.4) it seems warranted to base the following answers on the results of the investigation.

- (1) While mental capacity and physique are not absolutely dependent on one another there is in general a very close association.

(2) /

- (2) Better housing is closely associated both with better nutrition and greater mental capacity, but it is not the vital factor causing these improvements.
- (3) The most potent factor governing the development of the child is the maternal efficiency. Where this is good, the home conditions and the general physique and wellbeing of the child show marked improvement. Maternal efficiency in its turn appears to depend very largely on there being a certain minimum income per person in the household.

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APPENDIX.TABLE 1.

(p.5)

Age Distribution of Children Examined.

Age-Yrs.VIII.												IX.						
Mos.	2	3	4	5	6	7	8	9	10	11		1	2	3	4	5	6	
No.of Cases	5	12	27	54	60	87	85	76	84	94	101	66	75	46	51	29	3	
Age-Yrs. XII.																		
Mos.		10	11			1	2	3	4	5	6	7	8	9	10	11		XIV.
No.of Cases		1	36	65	50	65	64	77	56	65	62	51	39	30	18	3	1	

TABLE 2.

(p.6)

All Children sub-divided according to Mental Capacity.

		Advanced	Normal	Retarded	Very Retarded	Totals
IX.Years Group	-Boys	52	259	142	26	479
	-Girls	60	270	120	26	476
	- All cases	112	529	262	52	955
XIII.Years Group	-Boys	34	175	91	46	346
	-Girls	59	165	83	30	337
	- All cases	93	340	174	76	683

TABLE 3.

(p.7)

Irregular Attenders sub-divided according to Mental Capacity.

		Advanced	Normal	Retarded	Very Retarded	Totals
IX.Years Group	- Boys	10	61	48	14	133
	- Girls	21	73	59	14	167
	- All Irregular Attenders	31	134	107	28	300
XIII.Years Group	- Boys	10	39	24	15	88
	- Girls	14	34	23	8	79
	- All Irregular Attenders	24	73	47	23	167

TABLE 3a.

(p.7)

Figures in Table 3 stated as group category percentages.

		Advanced	Normal	Retarded	Very Retarded
IX.Years Group	- Boys	7.5	45.9	36.1	10.5
	- Girls	12.6	43.7	35.3	8.4
	- All Irregular Attenders	10.3	44.7	35.7	9.3
	- All Cases (Table 2)	11.7	55.4	27.4	5.5
XIII.Years Group	- Boys	11.4	44.3	27.3	17.0
	- Girls	17.7	43.0	29.1	10.2
	- All Irregular Attenders	14.4	43.7	28.4	13.5
	- All Cases (Table 2)	13.6	49.8	25.5	11.1

TABLE 4.

(p.7)

Irregular Attenders subdivided according to size of House.

	I.Apt.	II.Apt.	III.Apt.	IV.Apt.	>IV.Apt.
IX.Years Group - No.	46	137	61	26	30
- Percent.	(46.5)	(30.1)	(29.8)	(23.9)	(34.4)
XIII. " " - No.	12	56	45	25	29
- Percent.	(42.8)	(24.6)	(32.1)	(31.3)	(38.2)

TABLE 5.

(p.8)

No.of Irregular Attenders from Houses classified according to No.of Persons per Apt.

	>3 pers.per apt.	Houses with >2 pers.per apt.	2 or <2 pers.per apt.
IX.Years Group - No.	60	128	172
- Percent.	(38.7)	(34.4)	(29.4)
XIII. " " - No.	20	55	112
- Percent.	(35.7)	(27.0)	(31.9)

TABLE 6.

(p.8)

Irregular Attenders sub-divided according to No.of Persons per Apt.in their Mental Capacity Divisions.

	Persons per Apt.	Adv.	Norm.	Ret.	Very Retarded
IX.Years Group 2 or less - No.		18	79	58	17
- Percent.		(10.5)	(45.9)	(33.7)	(9.9)
over 2 - No.		13	55	49	11
- Percent.		(10.2)	(43.0)	(38.2)	(8.6)
XIII. " " 2 or less - No.		20	48	32	12
- Percent.		(17.9)	(42.9)	(28.6)	(10.6)
over 2 - No.		4	25	15	11
- Percent.		(7.3)	(45.4)	(27.3)	(20.0)

TABLE 7.

(p.8)

Irregular Attenders sub-divided according to Parents' Occupation.

	Manual.	Sedentary.	Professional.
IX.Years Group - No.	258	30	12
- Percent.	(31.1)	(30.0)	(44.4)
XIII. " " - No.	139	19	9
- Percent.	(29.6)	(28.4)	(56.2)

TABLE 8.*

(p.10)

Standard Heights and Weights (Anthropometric Committee).

	Age	8 - 8	8 - 9	8 - 10	8 - 11	9 - 0	9 - 1	9 - 2	9 - 3
Boys	- Ht.	47.5	47.7	47.8	48.1	48.3	48.5	48.7	48.9
	- Wt.	55.7	56.2	56.7	57.2	57.6	58.1	58.5	59.0
Girls	- Ht.	46.9	47.1	47.3	47.5	47.7	47.8	48.0	48.2
	- Wt.	52.6	52.9	53.2	53.5	53.8	54.1	54.4	54.7
	Age	13-0	13-1	13-2	13-3	13-4	13-5	13-6	13-7
Boys	- Ht.	55.9	56.1	56.3	56.4	56.6	56.8	56.9	57.1
	- Wt.	80.7	81.2	81.7	82.2	82.7	83.2	83.7	84.2
Girls	- Ht.	55.9	56.0	56.2	56.4	56.5	56.7	56.9	57.0
	- Wt.	81.8	82.7	83.6	84.5	85.4	86.3	87.2	88.1

TABLE 9.

(p.10)

Av. Ages, Hts. & Wts. of Children sub-divided according to Mental Capacity.

			Advanced	Normal	Retarded	Very Retarded
IX.Years Group	- Boys	- Age	8 - 10	8 - 11	8 - 10	9 - 1
		- Ht.	49.5	49.4	48.6	48.2
		- Wt.	58.2	57.6	55.7	53.5
	- Girls	- Age	8 - 10	8 - 10	8 - 9	9 - 0
		- Ht.	49.0	48.7	48.2	47.2
		- Wt.	55.0	54.8	53.3	51.2
XIII. " "	- Boys	- Age	13 - 4	13 - 5	13 - 5	13 - 5
		- Ht.	57.5	57.4	57.3	57.0
		- Wt.	86.6	85.8	84.1	84.0
	- Girls	- Age	13 - 4	13 - 5	13 - 4	13 - 5
		- Ht.	57.9	58.4	57.6	56.2
		- Wt.	85.9	89.0	87.2	81.1

TABLE 9a.

(p.10)

Variation from Standards of Hts. & Wts. in Table 9.

			Advanced	Normal	Retarded	Very Retarded
IX.Years Group	- Boys	- Ht.	+ 1.7	+ 1.4	+ 0.8	- 0.3
		- Wt.	+ 1.5	+ 0.4	- 1.0	- 4.6
	- Girls	- Ht.	+ 1.7	+ 1.4	+ 1.1	- 0.5
		- Wt.	+ 1.8	+ 1.6	+ 0.4	- 2.9
XIII. " "	- Boys	- Ht.	+ 0.9	+ 0.6	+ 0.5	+ 0.2
		- Wt.	+ 3.9	+ 2.6	+ 0.9	+ 0.8
	- Girls	- Ht.	+ 1.7	+ 2.0	+ 1.4	- 0.2
		- Wt.	+ 0.5	+ 2.7	+ 1.8	- 5.2

* Throughout the tables Ages are given in years and months, Heights in inches and Weights in pounds.

TABLE 10.

(p.10)

Nos.with Av.Ages, Hts.& Wts.of Children sub-divided according to Size of House.

		No. of Apartments.				
		I.	II.	III.	IV.	>IV.
IX.Years Group -						
Boys	- No.	37	245	107	42	48
	- Age	8 - 11	8 - 10	8 - 10	8 - 10	8 - 11
	- Ht.	48.3	48.8	48.9	49.9	49.9
	- Wt.	53.8	56.1	56.0	61.0	59.6
Girls	- No.	62	210	98	67	39
	- Age	8 - 9	8 - 11	8 - 10	8 - 9	8 - 9
	- Ht.	44.4	48.4	49.0	49.1	49.4
	- Wt.	51.6	53.7	55.3	55.8	57.7
XIII.Years Group -						
Boys	- No	17	146	79	56	48
	- Age	13 - 4	13 - 4	13 - 4	13 - 4	13 - 5
	- Ht.	55.7	56.4	57.3	57.5	59.7
	- Wt.	78.4	82.6	85.9	85.0	94.9
Girls	- No.	17	128	97	43	52
	- Age	13 - 3	13 - 5	13 - 5	13 - 4	13 - 4
	- Ht.	54.9	57.0	58.5	58.3	59.1
	- Wt.	76.5	85.1	88.1	88.7	93.8

TABLE 10a.

(p.10)

Variation from Standards of Hts.& Wts.in Table 10.

		I.	II.	III.	IV.	>IV.
IX.Years Group	- Boys - Ht.	+0.2	+1.0	+1.1	+2.1	+1.8
	- Wt.	-8.9	-0.6	-0.7	+4.3	+2.4
	- Girls - Ht.	-2.7	+0.9	+1.5	+2.0	+2.3
	- Wt.	-1.3	+0.2	+2.1	+2.9	+4.8
XIII. "	" - Boys - Ht.	-0.9	-0.2	+0.7	+0.9	+2.9
	- Wt.	-4.3	-0.1	+3.2	+2.3	+11.7
	- Girls - Ht.	-1.5	+0.3	+1.8	+1.8	+2.6
	- Wt.	-8.0	-1.2	+1.8	+3.3	+8.4

TABLE 11.

(p.10)

Av.Ages, Hts.& Wts.of Children from Houses with 2 or less persons per apt.sub-divided according to Mental Capacity.

		Advanced	Normal	Retarded	Very Retarded	
IX.Years Group - Boys	- Age	8 - 10	8 - 11	8 - 10	9 - 1	
	- Ht.	49.4	49.8	49.0	49.2	
	- Wt.	57.5	58.7	56.2	55.3	
	- Girls	- Age	8 - 10	8 - 10	8 - 9	9 - 0
		- Ht.	49.2	49.5	48.6	47.5
		- Wt.	55.1	56.5	54.4	52.8
XIII. " " - Boys	- Age	13 - 3	13 - 5	13 - 5	13 - 6	
	- Ht.	58.1	57.9	57.8	57.9	
	- Wt.	88.7	87.7	85.7	86.9	
	- Girls	- Age	13 - 4	13 - 5	13 - 4	13 - 6
		- Ht.	58.5	59.0	58.4	57.5
		- Wt.	89.0	91.7	90.3	85.6

TABLE 12

(p.10)

Av.Ages, Hts.& Wts.of children from Houses with over 2 persons per apt.sub-divided according to Mental Capacity.

		Advanced	Normal	Retarded	Very Retarded	
IX.Years Group - Boys	- Age	8 - 10	8 - 10	8 - 10	9 - 2	
	- Ht.	49.8	48.4	47.9	47.0	
	- Wt.	59.2	54.9	54.7	51.5	
	- Girls	- Age	8 - 10	8 - 11	8 - 10	8 - 11
		- Ht.	48.4	48.1	47.7	46.9
		- Wt.	52.8	52.8	51.9	49.6
XIII. " " - Boys	- Age	13 - 2	13 - 5	13 - 4	13 - 3	
	- Ht.	56.3	56.5	56.4	55.8	
	- Wt.	82.3	81.4	80.3	80.5	
	- Girls	- Age	13 - 3	13 - 5	13 - 3	13 - 4
		- Ht.	56.5	57.0	56.9	55.4
		- Wt.	78.3	83.1	83.2	78.4

TABLE 13.

(p.11)

Av.Ages, Hts.& Wts.of Children from Houses with over 3 persons per apt.sub-divided according to Mental Capacity.

		Advanced	Normal	Retarded	Very Retarded	
IX.Years Group - Boys	- Age	8 - 10	8 - 10	8 - 10	9 - 3	
	- Ht.	49.9	47.8	47.7	46.5	
	- Wt.	60.3	53.4	53.4	49.8	
	- Girls	- Age	8 - 10	8 - 11	8 - 11	8 - 11
		- Ht.	48.4	47.9	48.0	45.7
		- Wt.	52.0	52.6	53.1	46.5
XIII. " " - Boys	- Age	13 - 0	13 - 6	13 - 3	13 - 3	
	- Ht.	56.5	56.4	58.4	54.2	
	- Wt.	80.5	80.5	82.3	75.8	
	- Girls	- Age	13 - 0	13 - 6	13 - 4	13 - 4
		- Ht.	57.5	54.8	56.5	57.1
		- Wt.	81.0	75.3	81.4	82.6

TABLE 12a.

(p.10)

Hts. and Wts. in Table 12 compared with those in Table 11.

			Advanced	Normal	Retarded	Very Retarded	
IX Years Group - Boys	- Ht.		+ 0.4	- 1.1	- 1.1	- 2.4	
	- Wt.		+ 1.7	- 3.3	- 1.5	- 4.2	
	- Girls	- Ht.		- 0.8	- 1.6	- 1.1	- 0.4
		- Wt.		- 2.3	- 4.0	- 2.8	- 2.9
XIII. " "	- Boys	- Ht.	- 1.7	- 1.4	- 1.2	- 1.6	
		- Wt.	- 5.9	- 6.3	- 4.9	- 4.9	
	- Girls	- Ht.	- 1.9	- 2.0	- 1.4	- 1.7	
		- Wt.	- 9.8	- 8.6	- 6.2	- 5.4	

TABLE 13a.

(p.11)

Hts. & Wts. in Table 13 compared with those in Table 11.

			Advanced	Normal	Retarded	Very Retarded	
IX Years Group - Boys	- Ht.		+ 0.5	- 1.7	- 1.3	- 3.1	
	- Wt.		+ 2.8	- 4.8	- 2.8	- 6.4	
	- Girls	- Ht.		- 0.8	- 1.6	- 0.8	- 1.6
		- Wt.		- 3.2	- 3.9	- 1.6	- 6.0
XIII. " "	- Boys	- Ht.	- 1.1	- 1.6	+ 1.0	- 3.2	
		- Wt.	- 6.7	- 7.7	- 2.4	- 9.6	
	- Girls	- Ht.	- 0.4	- 4.4	- 1.9	0.0	
		- Wt.	- 4.4	- 17.3	- 8.9	- 1.2	

TABLE 14.

(p.11)

Nos. with Av. Ages, Hts. & Wts. of Manual Workers' Children sub-divided according to No. of Persons per Apt. in home.

	Persons per Apt.	No.	B o y s .			G i r l s .			
			Age	Ht.	Wt.	No.	Age	Ht.	Wt.
IX Years Group	2 or less	228	8-10	49.2	56.8	240	8-10	49.2	55.3
	over 2	182	8-10	48.3	55.1	178	8-11	47.9	52.2
XIII. " "	2 or less	181	13-5	57.3	84.7	167	13-5	58.5	89.1
	over 2	111	13-4	56.3	80.7	118	13-4	56.6	81.8

TABLE 15.

(p.11)

Nos.with Av.Ages, Hts.& Wts.of Children sub-divided according to Parents' Occupation.

	Manual	Sedentary	Professional
IX.Years Group - Boys - No.	410	52	17
- Age	8 - 11	8 - 11	8 - 10
- Ht.	49.0	49.7	50.0
- Wt.	56.3	58.9	64.3
- Girls - No.	418	48	10
- Age	8 - 10	8 - 10	8 - 9
- Ht.	48.5	48.8	49.4
- Wt.	53.7	57.3	60.9
XIII. " " - Boys - No.	292	42	12
- Age	13 - 5	13 - 5	13 - 3
- Ht.	57.1	59.1	61.5
- Wt.	83.6	93.6	102.7
- Girls - No.	285	40	12
- Age	13 - 4	13 - 5	13 - 3
- Ht.	57.7	59.2	60.0
- Wt.	86.1	94.2	93.1

TABLE 15a.

(p.11)

Variations from Standards of Hts.& Wts.in Table 15.

	Manual	Sedentary	Professional
IX.Years Group - Boys - Ht.	+ 0.9	+ 1.6	+ 2.2
- Wt.	- 0.9	+ 1.7	+ 7.6
- Girls - Ht.	+ 1.2	+ 1.5	+ 2.3
- Wt.	+ 0.5	+ 4.1	+ 8.0
XIII. " " - Boys - Ht.	+ 0.3	+ 2.3	+ 5.1
- Wt.	- 0.4	+ 9.6	+ 20.5
- Girls - Ht.	+ 1.2	+ 2.5	+ 3.6
- Wt.	+ 0.7	+ 7.9	+ 8.6

TABLE 16.

(p.12)

Nos.with Av.Ages, Hts.& Wts.of Manual Workers' Children sub-divided according to Mental Capacity.

	Advanced	Normal	Retarded	Very Retarded	All Divs.
IX.Years Group -					
Boys - Abs.Nos.	41	220	125	24	
- Age	8 - 10	8 - 11	8 - 10	9 - 1	8 - 11
- Ht.	49.4	49.3	48.7	48.2	49.0
- Wt.	57.7	56.9	55.4	53.7	56.3
Girls - Abs.Nos.	53	234	107	24	
- Age	8 - 10	8 - 11	8 - 9	9 - 0	8 - 10
- Ht.	48.9	48.8	48.0	47.1	48.5
- Wt.	54.4	54.4	52.5	50.8	53.7
XIII.Years Group -					
Boys - Abs.Nos.	28	147	75	42	
- Age	13 - 5	13 - 5	13 - 7	13 - 5	13 - 5
- Ht.	56.9	57.1	57.7	56.6	57.1
- Wt.	83.3	84.3	82.9	82.3	83.6
Girls - Abs.Nos.	49	140	67	29	
- Age	13 - 4	13 - 5	13 - 4	13 - 5	13 - 4
- Ht.	57.7	58.2	57.3	56.2	57.7
- Wt.	84.7	88.0	85.3	81.3	86.1

TABLE 16a.

(p.12)

Variations from Standards of Hts.& Wts.in Table 16.

		Advanced	Normal	Retarded	Very Retarded	
IX.Years Group - Boys	- Ht.	+ 1.6	+ 1.2	+ 0.7	- 0.3	
	- Wt.	+ 1.0	- 0.3	- 1.3	- 4.4	
	- Girls	- Ht.	+ 1.6	+ 1.3	+ 0.9	- 0.7
		- Wt.	+ 1.2	+ 0.9	- 0.4	- 3.3
XIII. " "	- Boys	- Ht.	+ 0.1	+ 0.3	+ 0.6	- 0.2
		- Wt.	+ 0.1	+ 1.1	+ 1.3	- 0.9
	- Girls	- Ht.	+ 1.2	+ 1.5	+ 0.8	- 0.5
		- Wt.	- 0.7	+ 1.7	- 0.1	- 5.0

TABLE 17.

(p.12)

Nos.with Av.Ages, Hts.& Wts.of Children with One or More Physical Defects, sub-divided according to Mental Capacity.

		Advanced	Normal	Retarded	Very Retarded	
IX.Years Group	Boys - No.	33	171	112	14	
	- Age	8 - 10	8 - 10	8 - 9	9 - 0	
	- Ht.	49.2	49.4	48.4	48.9	
	- Wt.	56.8	57.3	55.1	55.6	
	Girls	- No.	41	178	87	22
		- Age	8 - 10	8 - 10	8 - 9	9 - 0
		- Ht.	49.0	48.7	48.0	47.1
		- Wt.	55.0	54.7	53.3	51.4
XIII. " "	Boys	- No.	18	91	58	36
		- Age	13 - 3	13 - 5	13 - 4	13 - 4
		- Ht.	56.9	57.0	57.1	56.9
		- Wt.	82.7	83.7	82.8	83.6
	Girls	- No.	29	92	54	19
		- Age	13 - 3	13 - 5	13 - 4	13 - 5
		- Ht.	57.8	58.2	57.2	55.9
		- Wt.	86.1	88.6	85.3	82.1

TABLE 17a.

(p.12)

Variations from Standards of Hts.& Wts.in Table 17.

		Advanced	Normal	Retarded	Very Retarded	
IX.Years Group - Boys	- Ht.	- 0.3	+ 0.3	+ 0.1	+ 0.9	
	- Wt.	- 1.4	+ 0.2	- 0.1	+ 2.6	
	- Girls	- Ht.	0.0	0.0	- 0.2	- 0.1
		- Wt.	0.0	- 0.1	0.0	+ 0.2
XIII. " "	- Boys	- Ht.	0.0	- 0.4	+ 0.1	+ 0.1
		- Wt.	- 3.0	- 2.1	- 0.8	+ 0.1
	- Girls	- Ht.	- 0.3	- 0.2	- 0.4	- 0.3
		- Wt.	+ 1.1	- 0.4	- 1.9	+ 1.0

TABLE 18.

(p.12)

Nos. with Av. Ages, Hts. & Wts. of Employed Children sub-
divided according to Mental Capacity.

		Advanced	Normal	Retarded	Very Retarded
XIII. Years Group - Boys	- No.	8	37	26	11
	- Age	13 - 1	13 - 6	13 - 5	13 - 6
	- Ht.	57.6	56.8	56.6	56.9
	- Wt.	88.9	82.7	81.4	83.5
- Girls	- No.	3	7	4	2
	- Age	13 - 4	13 - 4	13 - 5	13 - 4
	- Ht.	57.8	57.5	57.0	58.1
	- Wt.	88.3	80.5	95.4	85.0

TABLE 18a.

(p.12)

Hts. & Wts. of Boys in Table 18 compared with those of
All XIII. Year Group Manual Workers' Boys.

	Advanced	Normal	Retarded	Very Retarded
Height	+ 1.4	- 0.4	- 0.8	+ 0.2
Weight	+ 7.6	- 2.1	- 1.0	+ 1.2

TABLE 19.

(p.13)

Nos. with Av. Ages, Hts. & Wts. of Irregular Attenders
sub-divided according to Mental Capacity.

		Advanced	Normal	Retarded	Very Retarded
IX. Years Group - Boys	- No.	10	61	48	14
	- Age	8 - 8	9 - 3	8 - 10	9 - 2
	- Ht.	49.7	51.3	48.5	48.5
	- Wt.	57.1	59.9	55.5	53.1
- Girls	- No.	21	73	59	14
	- Age	8 - 9	8 - 11	8 - 9	9 - 0
	- Ht.	49.2	48.0	48.3	47.2
	- Wt.	51.5	53.1	53.8	50.6
XIII. " " - Boys	- No.	10	39	24	15
	- Age	13 - 2	13 - 3	13 - 4	13 - 5
	- Ht.	57.3	56.7	58.2	57.2
	- Wt.	82.1	82.5	87.4	84.5
- Girls	- No.	14	34	23	8
	- Age	13 - 3	13 - 4	13 - 5	13 - 7
	- Ht.	56.9	57.7	57.8	55.4
	- Wt.	83.6	87.7	88.8	79.8

TABLE 19a.

(p.13)

Hts. & Wts. in Table 19 Compared with those in Table 9.

	Advanced	Normal	Retarded	Very Retarded
IX. Years Group - Boys - Ht.	+ 0.6	+ 0.1	- 0.1	+ 0.1
- Wt.	- 0.1	+ 0.5	- 0.2	- 0.8
- Girls - Ht.	+ 0.4	- 0.9	+ 0.1	0.0
- Wt.	- 3.2	- 2.0	+ 0.5	- 0.6
XIII. " " - Boys - Ht.	+ 0.1	- 0.3	+ 1.1	+ 0.2
- Wt.	- 3.4	- 2.3	+ 3.8	+ 0.5
- Girls - Ht.	- 0.9	- 0.4	0.0	- 1.1
- Wt.	- 1.4	- 0.4	+ 0.7	- 3.1

TABLE 20

(p.14)

Children with Physical Defects as shown sub-divided according to Mental Capacity.

	Advanced	Normal	Retarded	Very Retarded	Totals
IX. Years Group					
One physical defect	61	217	121	21	420
" or more " defects	74	349	199	36	658
Slight defect of vision	9	44	27	4	84
Marked " " "	8	35	20	8	71
Enlarged tonsils	25	86	44	6	161
Anaemia or functional cardiac defect	2	9	5	1	17
XIII. Years Group					
One physical defect	35	129	71	30	265
" or more " defects	47	183	112	55	397
Slight defect of vision	7	31	22	10	70
Marked " " "	6	24	11	9	50
Enlarged tonsils	12	39	22	9	82
Anaemia or functional cardiac defect	5	22	10	1	38

TABLE 20a.

(p.14)

Figures in Table 20 stated as group category percentages.

	Advanced	Normal	Retarded	Very Retarded
IX. Years Group				
One physical defect	14.5	51.7	28.8	5.1
" or more " defects	11.2	53.0	30.2	5.6
Slight defect of vision	10.7	52.4	32.1	4.8
Marked " " "	11.3	49.3	28.2	11.2
Enlarged tonsils	15.5	53.4	27.3	3.8
Anaemia or functional cardiac defect	11.8	52.9	29.4	5.9
All Cases (Table 2)	11.7	55.4	27.4	5.5
XIII. Years Group				
One physical defect	13.2	48.7	26.8	11.3
" or more " defects	11.8	46.1	28.2	13.9
Slight defect of vision	10.0	44.3	31.4	14.3
Marked " " "	12.0	48.0	22.0	18.0
Enlarged tonsils	14.6	47.6	26.8	11.0
Anaemia or functional cardiac defect	13.2	57.9	26.3	2.6
All Cases (Table 2)	13.6	49.8	25.5	11.1

TABLE 21.

(p.15)

Nos. of Irregular Attenders and of Children from Houses
with more than 2 persons per apt. in the various
categories enumerated.

	IX.Years Group		XIII.Years Group	
	Irreg. Attenders	Overcrowded Houses.	Irreg. Attenders	Overcrowded Houses
All Children	300	370	167	240
One or more physical defects	213	254	106	149
Sl.defect of vision	28	37	17	25
Marked " " "	33	37	13	21
Enlarged tonsils	48	48	18	30
Anaemia or functional cardiac defect	4	3	12	14
Cleanliness and clothing				
- Good	236	275	123	188
- Mod.	44	68	18	43
- Bad	20	27	6	9

TABLE 21a.

(p.15)

Figures in Table 21 stated as percentages.

	IX.Years Group		XIII.Years Group	
	Irreg. Attenders	Overcrowded Houses	Irreg. Attenders	Overcrowded Houses
All children	31.4	38.7	24.4	35.1
One or more physical defects	32.4	38.6	26.4	37.5
Sl.defect of vision	33.3	44.0	24.3	35.7
Marked " " "	46.5	52.1	27.7	44.7
Enlarged tonsils	30.0	30.0	22.0	36.6
Anaemia or functional cardiac defect	21.1	15.8	31.6	36.8
Cleanliness and clothing				
- Good	29.6	34.5	27.1	32.2
- Mod.	39.3	59.1	25.0	49.4
- Bad	47.9	64.3	75.0	75.0

TABLE 22.

(p.15)

Nos. of Regular Attenders in the Various Categories enumerated
sub-divided according to Mental Capacity.

	Very				Totals
	Advanced	Normal	Retarded	Retarded	
IX.Years Group					
One or more phys.defects	53	258	118	16	445
Sl.defect of vision	4	35	14	3	56
Marked " " "	4	18	12	4	38
Enlarged tonsils	20	63	27	3	113
Anaemia or functional cardiac defect	2	7	3	1	13
All Regular Attenders	81	395	155	24	655
XIII.Years Group					
One or more phys.defects	28	107	65	25	225
Slight defect of vision	4	18	13	1	36
Marked " " "	4	13	6	4	27
Enlarged tonsils	8	33	17	6	44
Anaemic or functional cardiac defect	2	12	8	1	23
All Regular Attenders	50	206	93	35	384

TABLE 22a.

(p.15)

Figures in Table 22 stated as group category percentages.

	Advanced	Normal	Retarded	Very Retarded
IX.Years Group				
One or more physical defects	11.9	58.0	26.5	3.6
Slight defect of vision	7.1	62.5	25.0	5.4
Marked " " "	10.5	47.4	31.6	10.5
Enlarged tonsils	17.7	55.8	23.9	2.6
Anaemia or functional cardiac defect	15.4	53.8	23.1	7.7
All Regular Attenders	12.4	60.3	23.7	3.6
XIII.Years Group				
One or more physical defects	12.4	47.6	28.9	11.1
Slight defect of vision	11.1	50.0	36.1	2.8
Marked " " "	14.8	48.1	22.3	14.8
Enlarged tonsils	12.5	51.6	26.6	9.3
Anaemia or functional cardiac defect	8.7	52.2	34.7	4.4
All Regular Attenders	13.0	53.6	24.2	9.2

TABLE 23.

(p.16)

Nos. of Children with Physical Defects as enumerated from Houses with 2 or less persons per apt. sub-divided according to Mental Capacity.

	Advanced	Normal	Retarded	Very Retarded	Totals
IX.Years Group.					
One or more physical defects	50	216	118	20	404
Slight defect of vision	1	27	16	3	47
Marked " " "	5	17	7	5	34
Enlarged tonsils	19	61	30	3	113
Anaemia or functional cardiac defect	2	7	5	-	14
XIII.Years Group					
One or more physical defects	34	121	68	25	248
Slight defect of vision	6	23	12	4	45
Marked " " "	2	17	7	3	29
Enlarged tonsils	9	23	13	7	52
Anaemia or functional cardiac defect	4	12	7	1	24

TABLE 23a.

(p.16)

Figures in Table 23 stated as group category percentages.

	Advanced	Normal	Retarded	Very Retarded
IX.Years Group				
One or more physical defects	12.4	53.5	29.2	4.9
Slight defect of vision	2.2	57.4	34.0	6.4
Marked " " "	14.7	50.0	20.6	14.7
Enlarged tonsils	16.9	54.0	26.5	2.6
Anaemia or functional cardiac defect	14.3	50.0	35.7	-
All Cases (Table 33a)	13.0	55.0	27.4	4.6
XIII.Years Group				
One or more physical defects	13.7	48.7	27.4	10.2
Slight defect of vision	13.3	51.1	26.7	8.9
Marked " " "	6.9	58.6	24.1	10.4
Enlarged tonsils	17.3	44.2	25.0	13.5
Anaemia or functional cardiac defect	16.7	50.0	29.2	4.1
All Cases (Table 33a)	14.7	52.4	24.8	8.3

TABLE 24.

(p.16)

Children with Physical Defects sub-divided according to Parents' Occupation.

	Manual	Sedentary	Professional
IX.Years Group			
One or more physical defects	579	65	14
Slight defect of vision	73	9	2
Marked " " "	63	7	1
Enlarged tonsils	136	20	5
Anaemia or functional cardiac defect	14	3	-
XIII.Years Group			
One or more physical defects	348	40	9
Slight defect of vision	59	10	1
Marked " " "	47	3	-
Enlarged tonsils	68	13	1
Anaemia or functional cardiac defect	31	5	2

TABLE 24a.

(p.16)

Figures in Table 24 stated as group category percentages.

	Manual	Sedentary	Professional
IX.Years Group			
One or more physical defects	70.0	65.0	51.9
Slight defect of vision	8.8	9.0	7.4
Marked " " "	7.6	7.0	3.7
Enlarged tonsils	16.4	20.0	18.5
Anaemia or functional cardiac defect	1.7	3.0	-
XIII.Years Group			
One or more physical defects	60.7	48.8	37.5
Slight defect of vision	10.2	12.2	4.2
Marked " " "	8.1	3.7	-
Enlarged tonsils	11.8	15.9	4.2
Anaemia or functional cardiac defect	5.4	6.1	8.3

TABLE 25.

(p.16)

Av.Ages, Hts.& Wts.of Children with Enlarged Tonsils & of All Children examined.

	B o y s		G i r l s	
	Enl.tonsils	All Cases	Enl.tonsils	All Cases
IX.Years Group - Age 8 - 10				
- Ht.	48.9	49.1	49.0	48.6
- Wt.	56.4	56.9	57.1	54.2
XIII. " " - Age 13 - 5				
- Ht.	57.1	57.4	58.3	57.9
- Wt.	83.8	85.2	89.7	87.3

TABLE 26.

(p.17)

Number of Hours in Bed each Night.

	Advanced	Normal	Retarded	Very Retarded
IX.Years Group - All children				
- Employed "	10.7	10.8	10.8	10.8
- Employed "	9.0	10.2	10.1	-
XIII. " " - All "				
- Employed "	9.9	9.9	9.9	9.8
- Employed "	10.0	9.3	9.3	9.1

TABLE 27.

(p.18)

Employed Children sub-divided according to Mental Capacity.

	Advanced		Normal		Retarded		Very Retarded		Totals
	No.	%	No.	%	No.	%	No.	%	
XIII.Years Group									
- Employed Boys	8	(9.8)	37	(45.1)	26	(31.7)	11	(13.4)	82
- " Girls	3		7		4		2		16
- All " Children	11	(11.2)	44	(44.8)	30	(30.6)	13	(13.4)	98
- All "		(13.6)		(49.8)		(25.5)		(11.1)	
- " Boys		(9.8)		(50.6)		(27.0)		(12.6)	
- Manual Workers' Boys		(9.6)		(50.3)		(25.7)		(14.4)	

TABLE 28.

(p.18)

Employed and Manual Workers' Boys sub-divided according to whether they come from Houses with 2 or less or more than 2 persons per apt.in their mental Capacity divisions.

	Advanced		Normal		Retarded		Very Retarded	
	No.	%	No.	%	No.	%	No.	%
XIII.Years Group								
Employed Boys - Overcrowded houses	2	(25.0)	16	(43.2)	10	(38.5)	5	(45.5)
- Other houses	6		21		16		6	
Manual Workers' Boys								
- Overcrowded houses	10	(35.7)	53	(36.1)	26	(34.7)	21	(50.0)
- Other houses	18		94		49		21	

TABLE 29.

(p.20)

All Children sub-divided according to Size of House in their Mental Capacity Divisions.

	Advanced		Normal		Retarded		Very Retarded		Totals
	No.	%	No.	%	No.	%	No.	%	
IX.Years Group									
I.Apartment house	12		49		32		6		99
II. " "	47		259		120		29		455
III. " "	24		112		57		12		205
IV. " "	26		57		25		1		109
>IV. " "	3		52		28		4		87
XIII.Years Group									
I.Apartment House	4		13		8		9		34
II. " "	38		123		74		39		274
III. " "	24		97		37		18		176
IV. " "	13		55		26		5		99
>IV. " "	14		52		29		5		100

TABLE 29a.

(p.20)

Figures in Table 29 stated as group category percentages.

	Advanced	Normal	Retarded	Very Retarded
IX.Years Group				
I. Apartment House	12.0	49.0	32.0	6.0
II. " "	10.3	56.9	26.4	6.4
III. " "	11.7	54.6	27.8	5.9
IV. " "	23.9	52.3	22.9	0.9
>IV. " "	3.4	59.8	32.2	4.6
All Cases (Table 2)	11.7	55.4	27.4	5.5
XIII.Years Group				
I. Apartment House	11.7	38.2	23.4	26.7
II. " "	13.8	44.9	27.0	14.3
III. " "	13.6	55.1	21.0	10.3
IV. " "	13.1	55.5	26.2	5.2
>IV. " "	14.0	52.0	29.0	5.0
All Cases (Table 2)	13.6	49.8	25.5	11.1

TABLE 30.

(p.20)

Percentages of Various Sizes of House, overcrowded on a standard of more than 2 persons per apt.

	No. of Apartments.				
	I.	II.	III.	IV.	>IV.
IX.Years Group	98.0	51.6	17.1	2.8	1.2
XIII.Years Group	100.0	57.4	22.7	5.1	2.0
Combined	98.5	53.5	19.7	3.8	1.6

TABLE 31.

(p.20)

Nos. of Children sub-divided according to Parents' Occupation in each size of House.

	I.Apt.	II.Apt.	III.Apt.	IV.Apt.	>IV.Apt.
IX.Years Group					
Manual	96	438	182	75	37
Sedentary	3	17	23	28	29
Professional	-	-	-	6	21
XIII.Years Group					
Manual	33	256	166	79	43
Sedentary	1	18	9	16	38
Professional	-	-	1	4	19

TABLE 32.

(p.20)

Nos. of Manual, Sedentary & Professional Workers' Children in Houses with more than 2 persons per apt.

	Manual		Sedentary		Professional	
	No.	%	No.	%	No.	%
IX.Years Group	360	(43.5)	10	(10.0)	-	(0.0)
XIII. " "	229	(39.7)	11	(13.4)	-	(0.0)
All Cases	589	(41.9)	21	(11.5)	-	(0.0)

TABLE 33.

(p.20)

All Children sub-divided according to No. of Persons per Apt. in their Mental Capacity divisions.

	Advanced	Normal	Retarded	Very Retarded	Totals
IX.Years Group					
- A - Boys	10	41	16	6	73
- B - "	18	106	51	12	187
- C - "	34	153	91	14	292
- A - Girls	10	43	23	6	82
- B - "	18	101	51	13	183
- C - "	42	169	69	13	293
- A - All Cases	20	84	39	12	155
- B - " "	36	207	102	25	370
- C - " "	76	322	160	27	585

XIII.Years Group					
- A - Boys	1	18	3	10	32
- B - "	11	57	28	21	117
- C - "	23	118	63	25	229
- A - Girls	2	10	16	7	35
- B - "	17	51	36	19	123
- C - "	42	114	47	11	214
- A - All Cases	3	28	19	17	67
- B - " "	28	108	64	40	240
- C - " "	65	232	110	36	443

Cases marked "A" are from houses with more than 3 persons per apt.
 " " "B" " " " " " " " 2 " " "
 " " "C" " " " " " 2 or less than 2 " " "

TABLE 33a.

(p.20)

Figures in Table 33 stated as group category percentages.

	Advanced	Normal	Retarded	Very Retarded
IX.Years Group				
- A - Boys	13.7	56.2	21.9	8.2
- B - "	9.6	56.6	27.3	6.5
- C - "	11.6	52.4	31.2	4.8
- A - Girls	12.2	52.4	28.1	7.3
- B - "	9.8	55.2	27.8	7.2
- C - "	14.3	57.7	23.5	4.5
- A - All Cases	12.9	54.2	25.2	7.7
- B - " "	9.7	55.9	27.5	7.0
- C - " "	13.0	55.0	27.4	4.6
XIII.Years Group				
- A - Boys	3.1	56.3	9.4	31.2
- B - "	9.4	48.7	24.0	17.9
- C - "	10.0	51.9	27.5	10.6
- A - Girls	5.7	28.6	45.7	20.0
- B - "	13.8	41.5	29.3	15.4
- C - "	19.6	53.3	21.9	5.2
- A - All Cases	4.5	41.8	28.4	25.3
- B - " "	11.7	45.0	26.7	16.6
- C - " "	14.7	52.4	24.8	8.3

TABLE 34.

(p.21)

All Children, sub-divided according to Parents' Occupation, in their Mental Capacity divisions.

	Advanced	Normal	Retarded	Very Retarded	Totals.
IX.Years Group					
Manual	94	454	232	48	828
Sedentary	16	59	22	3	100
Professional	2	16	8	1	27
XIII.Years Group					
Manual	77	287	142	71	577
Sedentary	14	40	23	5	82
Professional	2	13	9	-	24

TABLE 34a.

(p.21)

Figures in Table 34 stated as group category percentages.

	Advanced	Normal	Retarded	Very Retarded
IX.Years Group				
Manual	11.4	54.8	28.0	5.8
Sedentary	16.0	59.0	22.0	3.0
Professional	7.4	59.3	29.6	3.7
All Cases (Table 2)	11.7	55.4	27.4	5.5
XIII.Years Group				
Manual	13.3	49.7	24.6	12.4
Sedentary	17.1	48.8	28.0	6.1
Professional	8.3	54.2	37.5	-
All Cases (Table 2)	13.6	49.8	25.5	11.1

TABLE 35.

(p.21)

All Children sub-divided according to their Cleanliness & State of Clothing, in their Mental Capacity divisions.

	Advanced	Normal	Retarded	Very Retarded	Totals
IX.Years Group					
Good	103	441	217	37	798
Mod.	8	67	33	7	115
Bad	1	21	12	8	42
XIII.Years Group					
Good	82	293	150	59	584
Mod.	10	41	22	14	87
Bad	1	6	2	3	12

TABLE 35a.

(p.21)

Figures in Table 35 stated as group category percentages.

	Advanced	Normal	Retarded	Very Retarded
IX.Years Group				
Good	12.9	55.3	27.2	4.6
Mod.	7.0	58.3	28.7	6.0
Bad	2.4	50.0	28.6	19.0
XIII.Years Group				
Good	14.0	50.2	25.7	10.1
Mod.	11.5	47.1	25.3	16.1
Bad	8.3	50.0	16.7	25.0

TABLE 36.

(p.21)

Variation of Cleanliness of Children with Parents' Occupation.

IX.Years Group	Cleanliness	Manual	Sedentary	Professional	All Children
- Good	- No.	682	98	26	806
	- Percent.	(82.3)	(98.0)	(96.3)	(84.4)
- Mod.	- No.	105	2	1	108
	- Percent.	(12.7)	(2.0)	(3.7)	(11.3)
- Bad	- No.	41	-	-	41
	- Percent.	(5.0)	-	-	(4.3)
XIII. " "					
- Good	- No.	482	76	23	581
	- Percent.	(83.5)	(92.7)	(95.8)	(85.1)
- Mod.	- No.	83	6	1	90
	- Percent.	(14.4)	(7.3)	(4.2)	(13.2)
- Bad	- No.	12	-	-	12
	- Percent.	(2.1)	-	-	(1.7)

TABLE 37.

(p.21)

Variation of Cleanliness of Children with Size of House.

IX.Years Group	Clean- liness	I. Apt.	II. Apt.	III. Apt.	IV. Apt.	>IV. Apt.	All Houses
- Good		70	377	172	104	83	806
- Mod.		20	55	26	3	4	108
- Bad		9	24	6	2	-	41
XIII. " "							
- Good		22	220	154	89	96	581
- Mod.		9	47	21	10	3	90
- Bad		3	7	1	-	1	12

TABLE 37a.

(p.21)

Figures in Table 37 stated as percentages.

	Clean- liness	I. Apt.	II. Apt.	III. Apt.	IV. Apt.	>IV. Apt.	All Houses
IX.Years Group							
- Good		70.7	82.6	84.4	95.4	95.4	84.4
- Mod.		20.2	12.1	12.7	2.8	4.6	11.3
- Bad		9.1	5.3	2.9	1.8	-	4.3
XIII. " "							
- Good		64.7	80.2	87.5	89.9	96.0	85.1
- Mod.		26.5	17.2	11.9	10.1	3.0	13.2
- Bad		8.8	2.6	0.6	-	1.0	1.7

TABLE 38.

(p.23)

Nos. & Av. Ages, Hts. & Wts. of Children sub-divided according to Weekly Income per Person in the Household.

	Income	No.	Age	Ht.	Wt.
IX.Years Group - Boys	Under 7/6	18	8 - 10	48.5	55.5
	7/6-12/6	14	8 - 9	48.3	54.5
	Over 12/6	8	8 - 10	50.0	58.0
- Girls	Under 7/6	15	8 - 10	47.3	50.7
	7/6-12/6	20	8 - 10	47.8	52.5
	Over 12/6	5	8 - 8	50.2	58.5
XIII. " "					
- Boys	Under 7/6	11	13 - 2	57.0	87.3
	7/6-12/6	13	13 - 3	57.5	85.8
	Over 12/6	16	13 - 3	57.0	83.0
- Girls	Under 7/6	15	13 - 2	55.5	76.5
	7/6-12/6	15	13 - 4	55.8	76.5
	Over 12/6	10	13 - 5	58.0	86.3

TABLE 39.

(p.23)

Relationship between Income per Person & Persons per Apt.

No. of Cases.	Income	Persons per Apt.
59	Under 7/6	2.1
63	7/6 - 12/5	1.9
38	12/6 or more.	1.4

TABLE 40.

(p.23)

Relationship between Income per Person & Milk Consumption.

No. of Cases	Income	Milk Consumpt
52	7/2	2 pints or less
50	9/10	Over 2 but not over 3 pints
58	12/8	Over 3 pints

TABLE 41.

(p.24)

Nos. & Av. Ages, Hts. & Wts. of Children sub-divided according to Proportion of Income spent in Rent & Taxes.

		$\frac{R+T}{I}\%$	No.	Age	Ht.	Wt.	Av.	$\frac{R+T}{I}\%$
IX. Years Group - Boys	- 10% or Less		26	8-10	48.3	55	6.9	
	- Over 10%		14	8-9	49.5	57.7	15.8	
	- Girls - 10% or Less		14	8-10	47.9	52.4	7.1	
	- Over 10%		26	8-10	48.0	52.2	18.0	
XIII. " "	- Boys - 10% or Less		16	13-3	56.7	83.1	7.7	
	- Over 10%		24	13-4	57.5	86.4	15.7	
	- Girls - 10% or Less		23	13-4	55.6	75.8	7.2	
	- Over 10%		17	13-3	56.6	83.3	14.0	

TABLE 42.

(p.24)

Nos. & Av. Ages, Hts. & Wts. of Children sub-divided according to Milk Consumpt per Person per Wk.

		Milk Consumpt	No.	Age	Ht.	Wt.
IX. Years Group - Boys	- 2 pints or less		12	8-9	47.2	53.0
	- Over 2 but not over 3 pints		13	8-9	49.0	56.0
	- Over 3 pints		15	8-10	49.5	58.5
	- Girls - 2 pints or less		12	8-10	47.0	49.5
	- Over 2 but not over 3 pints		16	8-8	47.8	52.0
	- Over 3 pints		12	8-10	49.3	56.0
XIII. " "	- Boys - 2 pints or less		12	13-3	58.0	89.5
	- Over 2 but not over 3 pints		10	13-5	56.0	81.5
	- Over 3 pints		18	13-3	57.3	84.0
	- Girls - 2 pints or less		16	13-3	54.2	73.2
	- Over 2 but not over 3 pints		11	13-4	57.0	80.3
	- Over 3 pints		13	13-4	57.5	85

TABLE 43.

(p.24)

Nos. & Av. Ages, Hts. & Wts. of Children sub-divided according to Maternal Efficiency.

		Maternal Efficiency	No.	Age	Ht.	Wt.
IX. Years Group - Boys	- Good		30	8-10	49.0	56.9
	- Mod.		10	8-9	47.8	53.2
	- Girls - Good		26	8-10	48.6	54.1
	- Mod.		14	8-10	46.9	49.7
XIII. " "	- Boys - Good		30	13-3	57.1	84.9
	- Mod.		10	13-4	57.4	85.6
	- Girls - Good		29	13-4	56.9	80.1
	- Mod.		11	13-3	53.8	74.2

TABLE 44.

(p.24)

Relationship between Maternal Efficiency, Weekly Income per Person, Proportion of Income spent on Rent & Taxes, and Milk Consumpt per Person per Wk.

	Maternal Efficiency	Income	$\frac{R+T}{I}\%$	Milk Consumpt	
IX.Years Group - Boys -	Good	10/9	10.5	3.5	
	Mod.	7/7	8.6	1.7	
	- Girls -	Good	10/1	14.9	3.2
	Mod.	7/8	12.9	2.0	
XIII. " " - Boys -	Good	11/3	13.4	3.3	
	Mod.	10/9	9.9	2.9	
	- Girls -	Good	10/3	10.1	2.9
	Mod.	7/5	10.0	1.6	

TABLE 45.

(p.25)

Relationship between Mental Capacity of Children and Income per Adult per Week.

	Mental Capacity Division	Av. Income per Adult	No.of Cases.
IX.Years Group -	Advanced	21/10	20
	Normal	20/4	20
	Retarded	20/-	20
	Very Retarded	16/7	20
XIII. " " -	Advanced	20/-	20
	Normal	16/10	20
	Retarded	15/11	20
	Very Retarded	15/9	20

TABLE 46.

(p.26)

Intelligence Quotients of Children sub-divided according to Mental Capacity.

	Advanced	Normal	Retarded	Very Retarded
IX.Years Group	94	102	89	82
	107	101	99	86
	101	88	87	91
	127	106	84	72
	139	111	74	54
	141	118	84	58
	110	76	95	85
	114	95	98	76
	97	102	97	65
	102	100	98	72
	Averages	113	100	91
XIII.Years Group	99	92	82	70
	96	88	81	66
	99	96	100	83
	118	102	90	64
	117	109	95	72
Averages	106	97	90	71

TABLE 47.

(p.27)

Increase in Ht. & Wt. of Rehoused and Other Slum Children
after 2½ years.

	Period Rehoused	Rehoused		Others	
		Ht.	Wt.	Ht.	Wt.
Girls	1 yr.	5¼"	12¾ lbs.	4¾"	12½ lbs.
Boys	1 yr.	4½"	13¾ lbs.	5"	13¾ lbs.
"	2 yrs.	5"	14 lbs.		