

No. 31

WOMEN'S LABOUR IN BENGAL INDUSTRIES

BY

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Published by order of the Government of India

CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
1923

Agents for the Sale of Books published by the Superintendent of Government Printing, India, Calcutta.

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BULLETINS

OF

INDIAN INDUSTRIES AND LABOUR

No. 31]

1923

[June

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CHAPTER I

Introductory

The pages which follow embody the results of an investigation conducted in Bengal from November 1921 to October 1922. The investigation was undertaken primarily with a view to determining the influence which industrial work might exert on the health of the Indian woman worker, especially during the child-bearing ages, and on the well-being of her child.

The distribution of women workers in industries in Bengal suggested the value of enquiry in the following areas where the employment of women's labour was on a fairly regular and organized basis :—

- (a) In jute and cotton mills round Calcutta, where imported labour is brought into the neighbourhood of a large city.
- (b) In the tea districts, Dooars, Terai and Darjeeling Hills, where imported labour may be seen living under agricultural conditions.
- (c) On the Bengal coalfields, where many workers live in, or near their own homes.

Whenever possible in each mill or works visited a number of women were selected as representative of the different classes employed. The particulars furnished by them were embodied in individual records and it is upon these records that much of the detailed information contained in the following pages has been based. It is obvious that if such enquiries are to be of value they should be controlled by observations on conditions existing among women living in surrounding areas. For the purposes of comparison and control figures relating to an unselected population of Indian women were therefore obtained and acknowledgment must be made in this connection of the assistance received from members of municipal, voluntary and social organizations in Bengal.

Through the courtesy of the Bengal Chamber of Commerce, the Jute and Tea Associations and the Indian Mining Federation were approached, and each undertook to notify their members of the object of this enquiry, and to request that facilities might be afforded for obtaining the required information. Similar facilities for visits to cotton mills were obtained by direct application to individual owners. An effort was made to meet employers and managers, and to learn their views regarding the special conditions affecting the welfare of their women workers. The best employers in Bengal are playing an important part in the gradual improvement of conditions of health and sanitation among their labour, and to a certain extent women have shared in the better conditions now available, but it is not generally recognized by the managements employing industrial women workers that the peculiar conditions of life among Indian women necessitate special provisions for their welfare.

Personal observations during this enquiry showed that the strain of industrial life is chiefly felt by women workers during the child-bearing ages. Early in the enquiry it became evident that child-birth, being a physiological process, could not be isolated from the other factors which influence the normal development of a woman's life, and that, if observations of any value were to be made, environmental and economic factors should also be considered. For instance, before giving an opinion as to how long in pregnancy a woman worker should continue in a

Individual records

Interviews with employers

Special needs of industrial women workers

factory, it is necessary to know the nature of her work and her environment in the mill, and to appreciate what would be the conditions of her home life should she cease work. For the same reason any facts which came under observation as adversely affecting the normal development of the child or girl worker were noted, because of their latter detrimental effect on the physiological life of the woman.

It is better for the health of mother and child, if women workers do not undertake industrial work for six weeks before and after confinement; and following the recommendations of the International Labour Organization, legislation has been introduced in some countries to make such abstention from work compulsory. But since this cessation from work presupposes that adequate support during this period will be assured, such limitation would have no practical application for mill women workers in Bengal, since they themselves earn a bare living wage, and could not in most cases depend either on the father of the child or on relatives for sufficient nourishment for such a length of time, unless adequate maternity benefit were given conditional on their cessation from work.

An ideal condition of affairs would be either that a woman should not be required to work outside her household duties during pregnancy and for some considerable period after confinement, or that the employment in factories and works of pregnant women and young mothers should be graded under constant experienced medical supervision. The latter condition was carried out during the Great War in Government factories in England, but would be scarcely possible in Bengal works; while the former ideal state is incompatible with the peculiar living conditions and irregular family life led by women mill-workers in Bengal. An endeavour was therefore made during the course of this enquiry to determine whether other safeguards might not be found for the welfare of the Indian industrial woman worker and her child.

It will be seen from the conditions noted as existing in the various industries in Bengal, that there is great need for a considerable increase in the factory inspection staff. It also appears evident that in a Province where so large a number of women and child workers are employed, there

is a special need for women to be employed on the inspection staff. In other countries it has been shown that the appointment of women factory inspectors has led to a great amelioration in the conditions of employment of women's labour. Men inspectors, even if they had the time to spare, could not enquire fully into the conditions prevailing among Indian women workers. Even in these days of financial stringency, those interested in the development of industrialism in India should surely concern themselves with this matter, for it has been shown that while under present conditions the demand for labour is great and increasing, and cannot adequately be met, yet the death-rate among the children of industrial mothers is very high.

Those interested in social welfare could do much to influence public opinion in Bengal regarding the welfare of industrial women workers. It is to be regretted that very few public bodies, such as Municipalities and District Boards, concern themselves with this matter, nor at present are there any women social workers to help industrial women in this Province.

CHAPTER II

Jute and Cotton Mills Labour

A number of mills were visited in each area, in order that the results of the enquiry might be representative of the various conditions to be found in the different districts. Over a third of the total number of jute mills (76) in Bengal were visited. The cotton mills in Bengal are few in number (12), and compared with the jute industry the number of women workers employed is small.

Whenever circumstances permitted, both the manager of the mill and the doctor employed by the mill management were interviewed, and a number of women representative of the different classes of women workers employed in that particular mill. Sometimes, in addition, an opportunity was given of meeting managing agents, and also seeing assistant managers in the mills and some of the men workers.

The class of labour employed varied much in the different mills.

In the majority of jute and cotton mills, of the total labour employed, about two-thirds is said to be fairly stationary, while a third to a quarter of the total working population is fluctuating and constantly changing. In order to meet the demand for labour by the mills, large numbers of workers are recruited from other Provinces. Most of the less skilled workers imported to the mills were agriculturists by profession before they took up industrial work. The reasons frequently given for men and women leaving their homes were that poverty or famine caused them to seek this new work. Exceptions are met with among the skilled and better paid workers, for instance weavers come from castes whose hereditary occupation is weaving; these men were accustomed to carry on their work in a small way in their own homes, and are attracted to the mills by the high wages obtainable there.

While some mills recruited their labour chiefly from Telugu-speaking districts of the Madras Presidency, others employed considerable numbers of workers from Bihar and from the Central Provinces; Hindus and Mohammadans from the United Provinces are also largely represented.

Uriya workers are also employed. The Telugu workers are usually known at the mills as "Madrasis." In certain mills, within the past year, a new class of labour had been taken on into the factory. These were coolies from the Central Provinces, who had been previously employed by contractors on outdoor work around Calcutta.

Women form about one-quarter of the average daily workers in jute mills, and about one-fifth in cotton mills. The reasons given for the employment of women's labour were, that women were cheap labour, and steadier than the young boys who would be otherwise employed in their stead, also that a certain number of women were necessary about the mills to keep the men content. In certain districts further up the river from Calcutta where there was difficulty in obtaining workers, women's labour was very necessary, and women are employed in many different parts of the mills.

The workers from Bihar, the Central Provinces and the United Provinces have women with them and these women work in the mills, but they are not always the wives of the men with whom they live. The Uriya workers do not generally bring women to work with them. The Telugu workers bring women with them, often in addition to their wives, all of whom work in the mills. They have strong objection to these women living with men from other parts of India, in which case they are out-casted. An exception is made in the case of Uriya men, because they come from districts bordering on the Telugu country. The contractors' labourers from the Central Provinces lived in family groups and the physique of the women contrasted very favourably with that of the ordinary mill-worker, while their children were noticeably healthy.

The number of Bengalis among mill-workers is relatively small. Down the river from Calcutta, in the neighbourhood of Budge Budge and Ulubaria, a number of local men from the surrounding villages come to work in the mills, and return to their homes at the week-end; very occasionally their wives come to work with them. A certain number of Mohammadan families emigrate from Northern Bengal when faced by want in their own homes; these people usually keep together, and husband, wife and children may be found working in a group, as finishers in the hand-sewing department of a jute

mill. The ordinary respectable Bengali women around Calcutta are reluctant to undertake factory work. Some Bengali workers are women of good caste and family, who for some reason have offended family tradition and been out-casted; a number are women of fine physique who were said to be good workers. Apparently they took good care of their children, and in a number of cases provided for their schooling. A number of the Bengali women workers, however, were women of doubtful reputation. Such women were usually of low caste and of poor development, and looked unhealthy; one manager in whose mill the female labour was of chiefly of this class remarked that "he had noticed that they did not last long."

As it is scarcely possible for a woman to live for any length of time alone in a mill compound, women workers, if deserted by one man, usually seek other male protection. This protection may consist of not only living with the man, but in working near to him in the mill, in a position where he can keep an eye on the woman and prevent the attentions of other male workers; in return the woman gives over her earnings to the man. Managers stated that when a woman worker left a man, or if her man took up with another woman, the men would ask that the working positions of the women in the mill might be re-adjusted. If a man leaves one mill to seek work in another factory, the woman usually goes with him, but if the man takes up some other occupation the woman often continues in factory work.

Of the imported labour, many men still retain a share in their family land, and for this reason mill managers find that when up-country workers have saved some money they return to their homes for two or three months to look after their families and possessions, and usually only come back to mill work when all their savings have been spent. It is not customary for men returning to their homes to take back with them the women folk who have come down from their own districts. Even if the men eventually return to settle in their own homes, these women are left behind at the mills. Thus deserted women and children are to be found in the mill-area. Telugu men tend to settle down, and return less often to visit their own homes than is the custom with the up-country workers.

**Relations between men
and women workers**

**Return of imported
labour**

Women are mostly employed on less skilled work in the lesser paid parts of jute and cotton mills. Women who work in jute mills in the preparation department or the drawings or roving, have, in the course of their work, to move about fairly heavy receivers filled with jute. Otherwise the work done by women in a jute mill does not involve the lifting of heavy weights, but in many cases entails long hours of continuous standing. Only in the hand-sewing department do women sit at their work. In cotton mills women are employed in the drawing, reeling and roving processes, and also in the ring-carding department.

In most processes in a mill women have to maintain a certain speed of work, in order that the line of manufacture may not be interrupted. It would not be possible for a pregnant woman who felt exhausted to rest for any length of time without the overseer checking her. In the hand-sewing department of a jute mill where piece work is the rule, within limits the women can work as they like. The reasons given why in these mills women (*sardarnis*) are not employed to superintend the women and girl workers, instead of men (*sardars*), were, that it was not easy to get women sufficiently educated for this work, and also that it would be tiresome to have to place the women together in lines, so that a woman could direct them.

During the greater part of the period covered by this enquiry, jute mills were working four days during the week. A multiple shift system was the rule, except in mills in the immediate neighbourhood of Calcutta where the difficulty of obtaining labour was very great. The actual number of hours worked daily by women under the shift system in the preparation department was said to vary from nine to eleven hours, but there was evidence in certain cases that *sardars* encouraged women to work in additional shifts, for which they received extra pay. In some mills where the hand-sewing department was partitioned off from the factory, the writer met women who were working twelve hours a day on piece-work as finishers to earn a daily average wage of from five to six annas. All cotton mills work a one-shift day, the woman worker has an eleven-hour day, with a mid-day interval during which she usually returns to her own home.

It was the general opinion of the managers that multiple shifts lead to many abuses which they were unable to control, both among the men and women workers. A few managers had made observations regarding the length of the working day and output, and were of the opinion that a considerable gain in the efficiency of women workers would result from an eight-hour day, with shorter spells of work. No special arrangements were made with regard to the taking of meals by workers. In those factories where a one-shift day is the rule workers return to their home during the mid-day interval. Where multiple shifts are worked workers bring food with them unless their homes are situated near the mill.

The average woman worker in a jute mill receives a weekly wage of Rs. 2-8-0. It is customary for the mill authorities to keep at least one week's wages in arrears. In certain cases a small percentage was deducted by the overseer. Some managers considered that a woman by her own earning made little more than a living wage, and could not therefore afford to cease work for many days at childbirth, unless supported by the father of the child or by relatives. They added, however, that if a woman did get higher wages, she would probably benefit but little, since her earnings were usually given to the man with whom she was living. In cotton mills, the rate of wages is lower on the whole and women who are employed on the less skilled and lower paid processes tend to leave and take up better paid temporary work during the period jute presses are running, returning later to the cotton mills when the other work ceases. The management of cotton mills retain two or three weeks' wages in hand.

Men workers in many cases, as proved by Post Office returns, remit considerable sums of money to their homes which are often situated in poverty-stricken or famine areas. No records could be found to show that industrial women workers similarly remit money. It was said that occasionally they might have had savings put into jewellery, but usually the man with whom the woman was living benefited by her wages. Women who are mothers have also their children to consider. A number of Kabuli money-lenders were to be found round mill gates on pay day, and some workers were in debt to these men. No co-operative credit societies have been established in these areas.

Many enquiries were made and figures obtained from different sources, regarding the cost of living in the districts where jute and cotton mills are situated. It did not appear to be possible for single workers to live and maintain themselves on an adequate diet under five annas a day. Where several workers or a family messed together the cost might be slightly lower, but if a worker received higher wages a large sum was invariably set apart to provide a more adequate and varied diet. It is evident that the average woman worker cannot, on her own earnings, afford to give up work for any length of time. The condition of women workers if deserted by their men and left alone with children may be very difficult.

Most mills have shops selling grain and other necessities, either on the premises or in the immediate vicinity. Managers made a point of seeing that reasonable rates were charged. In one or two cases unsuccessful attempts have been made to establish co-operative stores. One of the reasons given for their failure was that they demanded cash payments while *baniyas* give credit until the next pay day.

Over half of the total child labour registered under the Indian Factories Act is employed in Bengal industries. The day's work for a half-timer under the Factories Act is limited to six hours. The Factories Act amendment raising the age limits for half-timers came into operation in Bengal on the 1st of July 1922. The minimum age at which children could be employed in mill work was then raised from 9 to 12 years, the upper age limit being raised simultaneously from 14 to 15 years. This new rule does not, however, apply to children already enrolled by mill authorities before 1922, and, therefore, for the purposes of this investigation, the age of half-timers may be taken as lying within the lower limits. The work undertaken by half-timers as winders involves spurts of great activity, and also the carrying of loads of fairly heavy bobbins. The majority of child workers show evidence of malnutrition and of physical strain.

Under the multiple shift system, half-timers in jute mills were found to be working in more than one mill on the same day. This abuse prevails chiefly in areas where two or more jute mills are adjacent. Each mill retains in its possession a certificate from the Certifying Factory

Surgeon for each particular half-timer, but children who desire to work in another mill present themselves to the certifying surgeon for a fresh certificate. They appear to have little difficulty in obtaining another certificate under the same or under a different name from the same surgeon. The only way of checking this abuse would be by comparison of the finger prints on each certificate, and by a large increase in the factory inspection staff. Children also go to help their mothers or relatives in the hand-sewing department, when their own period in the factory is completed. These abuses are also met with in cotton mills, but not to the same extent, owing to the single shift day.

In view of the early age at marriage of Indian women, the serious strain on the health of the many half-timers who work in more than one mill on the same day, should be recognized by mill managements. While sympathy is felt with many jute mill managers who deplored the abuses under the multiple shift system which they stated they were unable to control, it might be worth the consideration of those in authority why a system open to so many abuses should be allowed to continue in one industry in India, when such a system of working is condemned in every other country. Owing to the complexity of shifts under the multiple shift system it would appear almost impossible for outside inspection to cope with these abuses.

The average wage received by half-timers was about Re. 1-10 weekly in jute mills and rather less in cotton mills. Compared with women's labour half-timers are relatively highly paid, and managers prefer to employ as few half-timers as possible. Half-time girls specially were said to lead to trouble because they played about more, and also because of the proximity of older boys in the mill. The trouble that arises from the proximity of girl workers and young men in and around the factory was mentioned by several managers who anticipated increased trouble with the raised age of half-timers under the new Act.

Since under the new factory regulations children may not be employed in factories under twelve years of age, the provision of facilities for their education and useful occupation up to this age is a matter of urgent necessity. The provision of educational facilities for the children

of industrial workers would appear to be the province of some authority outside the mill. But the Municipalities, in the areas in which most of the jute mills are situated, have on their committees large numbers of jute mill managers and several of these managers told the writer that it was not in their interest to advocate increased expenditure for such objects as education, since the result would be increased taxes in the districts in which the jute mills are situated.

In a few jute mills the writer found that an attempt had been made to provide some small schools for half-timers and young children, and in one case it appeared that the attempt had been successful. It would seem unwise however to place the direction of the education of the half-timers under the mill management, for most managers said that if half-timers were in any way compelled to go to school, they were slack or did not wish to do mill work, and, therefore, the schooling of half-timers was not generally encouraged.

In some jute mills where the hand-sewing department is separated by a partition from the factory, it is customary to allow young children, who are under age, to sew alongside of parents or relatives to whose account the work done is credited. Such hours of work must have an unfavourable influence upon the bodily health and future development of the children concerned.

The result of environment on child life is a complex subject. If the environment of the mother be bad, that of the child will be unfavourable also. The influence of the health of the mother upon the health of the child is evident, hence the value of ante-natal care must be recognized. The child is dependent for its growth upon healthy food, and an unhealthy mother is in most cases unable to produce milk in the amount and quantity required for the child's up-bringing. In England and Wales it has been found that an unhealthy environment has a progressive effect, that when the infant mortality is high, an increase is also noticeable in the mortality in the succeeding years of life. The presence in Bengal mills of infants and under-age children is to be deprecated. The provision of a crèche or day nursery in the charge of a trained nurse, as successfully shown in a number of cotton mills in the Bombay Presidency, not only benefits the young child, but reacts to the employers'

benefit, since it has found that mothers when relieved of the care of their young children, work more steadily. There appears to be room for similar crèches in the compounds of Bengal jute and cotton mills.

CHAPTER III

Health of Mill Workers

In older and more crowded mills the fluff and dust in the air are considerable. In many mills the through ventilation or change of air in the parts where women work is inadequate, so that at certain times of the day the atmosphere is distinctly stuffy. If the total height is taken into account, the cubic space per worker might be considered as falling within statutory limits, but there was practically no free circulation of air. Control observations on ventilation were made by visiting the same mill at different times of the day. At four o'clock on a cold weather afternoon a distinctly stuffy impression was gained on entering a mill from the external air, while at eight o'clock in the morning the ventilation in the same part of the mill, under similar conditions of observation, had appeared adequate. A marked difference was noted in those jute mills in the immediate neighbourhood of Calcutta where a single shift day is worked, and in the cotton mills. Some of these are very old mills, but the complete emptying of the factory during the mid-day interval permitted of renewal and purifying of the air, and women workers in these mills looked more healthy. The floors on which the women have to move about were often uneven, and in a bad state of repair. The lighting was in most cases sufficient, but white-washing of windows was frequently inadequate, so that the glare might be considerable.

Since under the present industrial conditions in Bengal it is recognized that pregnant women and young mothers must continue in mill work, a small proportion of the considerable sums at present spent by works managements for purposes of health and sanitation might well be set aside for special provisions for women's welfare. The presence of fluff and dust, and the lack of movement of the air in the parts of mills where women work is worthy of attention. Bad ventilation is a fruitful cause of fatigue, not only through lack of freshness of a stagnant atmosphere, but also through lack of stimulation of the skin and the cooling properties of an atmosphere in motion.

Women's welfare

Apart from health considerations one known result of industrial fatigue is a limitation of output.

A number of mills outside Calcutta city limits provide housing for a proportion of their imported labour, because there is not sufficient accommodation for these workers in the neighbouring bazaars and *bastis*, and unless quarters were provided, imported labour would not settle down. The rent charged by mill authorities for a one-roomed house varied from two to four annas weekly. Much of the housing which had been erected by mill authorities was not satisfactory from the sanitary standpoint. Some mills are continuing to erect lines of a bad and insanitary type, rooms being placed in a line back-to-back, and with no proper arrangements for ventilation, the worst features being evident in houses which are double-storied. In many of the brick-walled rooms provided, there is no adequate provision for ventilation, and the placing of more or less horizontal roofs on a very narrow verandah does not permit of any relief being gained through shade. In certain mills, houses with small courtyards are provided for the better paid class of workers such as clerks and *darwans*. In some lines in the *katcha* type of building provided fairly adequate through ventilation was obtained, but many of these houses were in a bad state of repair.

In the case of mills distant from Calcutta where plenty of land for expansion was available the number of houses provided in mill lines was adequate and there was no evidence of overcrowding. Near Calcutta there is sub-letting of the rooms both by *darwans* and by the recognized occupiers. The average number supposed to occupy a one-roomed house was four adults, but managers said they had on occasion found as many as eleven to sixteen persons occupying one room. In most of the one-roomed houses provided for workers there is no outer-yard or compound, thus there is no provision for privacy unless the window of the room is blocked up, and in them, from the point of view of a respectable woman, protection is often inadequate.

From enquiries through Indian and English sources, and from personal knowledge of living conditions among the poorer classes in other parts of India, one must conclude that such irregular family life as is found among mill women in Bengal is not customary in the districts from

which the majority of mill labour is recruited. Though in certain districts custom may prevent a man from bringing his wife to industrial work with him, this is not the general rule among the castes concerned. The determining factor would appear to be that mill managements do not usually make provision for the housing of ineffective labour, and the want of privacy in many of the mill quarters provided is such that respectable women, even of low caste, could not live there.

Where there was evidence of a real family life among the workers, usually the home was situated outside the mill in a bazaar or *basti*. Such houses were of the Bengali type with bamboo and clay walls, and an overhanging thatched roof sheltering a comfortable outer platform or verandah. Through ventilation of a dwelling is ensured by a space being left between the wall and thatch. Women living in such homes obtain the necessary amount of privacy. The surroundings were often insanitary, and the rent charged was higher than in mill lines.

In most cases arrangements were made by the management to keep the open drains and surroundings of the lines in a sanitary condition, but the success of these efforts was often minimized by the placing of latrines at a considerable distance from the houses, so that the occupants used the open drains surrounding their homes. At the mills latrines are usually placed in connection with septic tanks, which are situated some distance from the factory, and involve the climbing of long flights of steps. In a few new mills a satisfactory type of small automatic flush latrines, connected with the septic tanks but placed at convenient distances round the compound, was a decided improvement. The adequacy of the lighting of mill lines varied considerably.

Like most illiterate people, the women met with in the course of this enquiry had little idea as to their present age, or of their age at marriage. From personal observation the writer noticed that women whose general condition might be described as "good," had in many cases either recently come from agricultural districts to mill work or had been at the mills for a number of years. The strain of industrial life appeared to affect most women at the child-bearing ages. The health of women workers also bore a certain relation

to the wages earned by their men folk or families ; where the family income was higher the women usually looked better nourished.

If workers are ill and incapacitated from work for any considerable period, they tend to drift away from the immediate neighbourhood of the mill ; therefore it is not possible to estimate correctly the incidence of chronic infections, such as tuberculosis, among these industrial workers. There was no evidence that tuberculosis was present among the workers examined, and the incidence of this infection cannot be high in Bengal mills. The occupational disease known as jute dermatitis occurred chiefly among the least paid workers in a jute mill, the women and boys in the preparation department, and among half-timers. A histological investigation carried out together with Major H. W. Acton, I.M.S., Professor of Pathology, Calcutta School of Tropical Medicine, showed that this irritative condition of the skin is set up by the blocking of the mouths of the glands in the skin with oil (used during the process of manufacture to soften the jute), and with dirt. Better paid workers were in many cases better nourished, and took more care of their persons, keeping their bodies in a cleanly state ; thus they escaped the disease.

The condition of the infants and young children of industrial mothers appeared to depend much on the mother's circumstances. Many infants in mills showed signs of malnutrition, and were in a dirty state.

Mill quarters, if built outside the factory yard, do not, for purpose of construction, come under the provisions of any supervising sanitary authority. In most cases the writer found that she was the first outsider interested in sanitation beyond the mill management to enter the workers' rooms. Thus though in many places overcrowding is known to exist, adequate provision for ventilation such as the placing of window openings or gratings sufficiently high up to prevent the occupiers being overlooked, or the provision of an entry for air between the wall and roof, is omitted. Where numbers of workers are thus crowded together, latrine accommodation should be placed within convenient distances. Such sanitary improvement would react on the health of the women and children housed in these quarters. It should not be possible for mills to continue to erect quarters known to be of a bad type.

The supply of drinking water for mill workers was usually ample from tube wells or filtered river water, and apparently of good quality. Taps were placed outside the factory, sometimes too far away for the convenience of the workers. All the workers are of low caste and drink from the same tap.

The usual cause of death of young children was said both by doctors and parents to be diarrhoea and fever. In dispensary registers fair number of deaths among young children were recorded, but as in no case were the total population figures known, it was not possible to say if the mortality among young children was excessive. Conditions found prevalent among Indian children generally and not peculiar to or more marked among the children of industrial women, such as the frequent giving of opium to quiet fretful babies by tired and harassed mothers, and the ill-health due to insufficient clothing of newly born children in the cold weather, are not mentioned here because they are dealt with in the various text-books now being published in India, for the use of Indian nurses and parents.

The majority of jute and cotton mills retain the services of a qualified doctor to attend accidents and to certify half-timers, such certification being temporary and requiring ratification at the next visit of a Certifying Surgeon of Factories. Many mills provide a well-built dispensary, a compounder, and a good stock of drugs, and workers may attend at stated hours daily for out-door treatment. At each mill a few women attended the mill dispensary for general complaints and in case of accident, but the large majority of women workers will not come to a dispensary together with men workers, and be treated by a male doctor. Advice was practically never sought for gynaecological complaints, or in a midwifery case, and but rarely for their babies in the disease of infancy. It is said that many mill doctors demand extra payment from the workers, and thus many of the men workers were prevented from seeking medical relief. The average mill doctor did not appear to take much interest in his work, some dispensaries were badly kept and the registers were not in good order. In a few mills the records of illness were well kept and efficient arrangements were made for the modern treatment of cholera. In many cases the mill manager

did not appear to appreciate fully the economic importance of preventive medicine.

Modern treatment was not given for venereal disease unless special fees were paid by the workers. **Venereal disease** Managers said that venereal disease was too big a proposition to be treated at a mill dispensary since so many workers were affected. At the present time each mill in Bengal is a centre for spreading among the imported workers a serious disease from which they would have probably been free in their own village homes : a disease, moreover, which has far-reaching consequences not only on the health of the men workers but on that of their wives and children. Mill doctors are supposed to visit in their own homes in mill lines workers who are too ill to attend dispensary. Since one doctor is employed to look after from four to six thousand workers, such visits are but rarely carried out unless private fees are given, or except in the case of an epidemic when managers themselves take the matter in hand.

Facilities obtainable outside a mill depend on the situation of the individual jute or cotton mill. In **Medical relief outside the mill** the neighbourhood of Calcutta there are medical facilities for both sexes, but the writer found no indication that industrial workers took advantage of these. Within the Calcutta municipal limits women workers would have been entitled to free attention from the municipal midwives, but only one instance was found of such aid being sought. Imported labour is much less bound by tradition than those living in their own homes, but many of the women seemed to be quite unaware of the medical facilities which lie within their reach. In a few instances men workers attended the District Board hospitals, *e.g.*, for venereal treatment, but there are no facilities in such hospitals for the nursing of women patients, and no instance was found of women workers attending them. Most of the mills are situated some miles from a hospital, and apart from aid received at the mill dispensary, workers must resort at their own cost to local indigenous treatment. The majority of men workers, if ill for any considerable time, return to their own country.

The majority of accidents to women in jute mills result from attempts to steal oil by rubbing with tow the machinery while in motion. **Arrangements for accidents or sickness** Compensation may be given for such accidents on the

merits of an individual case, but there is no rule on the subject. In many mills women are not employed as feeders of the jute softening machines in the preparation department, because in former days when this machine was not guarded many accidents occurred. Under present conditions there is no apparent reason why women should not do this work. Very few accidents occur in cotton mills, because the machinery now sent out from England is already provided with guards. No arrangements are made in case of sickness. If male workers are ill and off work for any length of time, they return if possible to their own country. Women workers when ill depend on the charity of their relatives or neighbours.

Mill dispensaries involve the management in a considerable annual expenditure, but it has been shown that under present conditions women workers are practically shut off from medical benefit.

Medical aid for women workers

There appears to be a place in a Bengal mill compound for an Indian nurse or health visitor to work among the women workers, gain their confidence, administer simple remedies under the direction of the mill doctor, visit women who are ill, and encourage such cases as necessary to come for treatment to the mill doctor. The aim of such a woman would be chiefly preventive, to help the women workers and their families to keep healthy. If she has had training as a health visitor she will have learnt how to make friends with, hold classes for and supervise the work of indigenous *dais*, and she should have no difficulty in coming into touch with the untaught *dais* who attend mill women. Such a trained worker should be able also to superintend a crèche.

A number of Indian mill managers in the Bombay Presidency and other parts of India have found that it pays financially to care for the health of their women labour in ways very similar to those described, for what the employers want is a sufficient supply of healthy and efficient labour to meet their demands. The experience of the one mill in Bengal which employs a woman nurse has similarly shown the expenditure to be financially worth while. The total expenditure for employment of a nurse or health visitor is relatively small, and might, to a considerable extent, be set off by economy in the general management of mill dispensaries, through the provision of skilled medical supervision.

Financial considerations

Owing to the fluctuating character of much of the labour employed in jute mills there are no records obtainable from which the number of children born to women workers during one year might be calculated. Individual enquiries among 132 women workers showed that 102 had had among them 338 children born alive, 139 of whom had been born while the mother was actually engaged in industrial work, and of these children born in industry 91 were alive to date. The usual measure of the effect of environment on child life is the infant mortality or number of deaths under one year out of each thousand births. It is evident that the death-rate among infants born while the mother is engaged in mill work is high, even in comparison with the known high death-rate among young children in and around Calcutta. The observation that out of 132 adult Indian women 30 said that they had never had children is arresting, and further examination of the individual records indicates that possibly many of these women were living irregularly. Mill doctors pointed out that a number of women workers denied having had children because they were ashamed to admit the fact when they had no real husbands. Certain managers stated that they thought a number of the women workers, owing to economic and family circumstances, did away with their offspring. Statistics regarding ante-natal deaths in most civilized countries are still far from complete ; recent investigations in Great Britain indicate that there are apparently for every thousand children born alive about 30 still-births. It was difficult to obtain information regarding children born dead, and it is probable that the total number of pregnancies must be greater than actually stated.

Among mill women the length of absence from work at the time of childbirth appeared to depend entirely on economic conditions, uninfluenced by social or religious customs, and varied from four days to two days. No form of maternity benefit was given. In no instance did social or religious customs appear to determine the length of absence, and women on resuming work after childbirth did not experience any difficulty in returning to their former employment. Fines are not exacted for non-attendance, but if a woman is absent from work in a factory no effort is made on the part of the management to find out if her absence is due to any cause connected with maternity. If a child had been born in mill lines or near a factory

the answer was often given that support had been inadequate; if the birth had taken place in the worker's own home in an agricultural district, the mother usually said that she had received sufficient food.

No special arrangements are made to enable a mother in a jute mill to nurse her infant, or to leave it under protection while she works in the mill. Women are allowed to take their children into the mill with them, and to feed them at will.

**Arrangements for
children of working
mothers**

The child lies around either alone, when accidents occasionally occur, or at times watched by an elder brother or sister who themselves are too young for half-time work in the mill. If the mother goes into the mill alone, such an elder child brings the baby to her in the mill to be nursed when required. In many mills the atmosphere in which these children lay was unfavourable for their health and development. No crèche or day nursery for the protection and care of the young children of working mothers has yet been established in a Bengal mill.

Women workers at the time of childbirth are accustomed to employ local *dais*, and pay fees ranging from Re. 1 to Rs. 5 for their confinement. The usual fee was from Rs. 2-8 to Rs. 3, eight annas less being paid among mill workers if the baby was a girl. If Rs. 5 is paid, massage daily for two to three weeks afterwards might be included. In many cases the *dais*, in addition to their fee, received the clothes used at the time of the confinement. Occasionally women who were chamars said they had been attended by a relative free of charge. Mohammadan women said they employed chamar *dais* if there were no Mohammadan *dais* available in the locality. Many women pointed out that *dais* were much more expensive near Calcutta than in their own country homes, where the usual fee was two annas for the birth of a girl and four annas for a boy. Women in the jute mills often collect dirty waste in preparation for their confinement.

The provision of maternity benefit among mill workers in Bengal, owing to the non-stationary character of much of the labour and to the irregular lives led by many women workers, would not be easy of adjustment. From opinions expressed by mill managers however it would appear that even if such benefits had to be provided women would still

Maternity benefit

be employed, because of the shortage of male workers, and because women are relatively cheap labour. If a benefit were all given in money, it is doubtful to what extent the mothers would really benefit since a woman worker hands over her earnings to the man with whom she is living, and it is evident that if the welfare of mother and child be considered, such benefit should be given partly in the form of food and partly in the provision of facilities for medical relief.

CHAPTER IV

The Tea Industry

A few representatives of the local aboriginal tribes in the Dooars and Terai work on the tea estates, but with the development of the tea industry a new population has been introduced into these districts. Thousands of coolies have been recruited from the Santhal Parganas and from the Chota Nagpur districts; these workers are of very low caste and many belong to aboriginal tribes. On the hill tea estates the workers are of Nepali extraction. Women's labour is much sought after, because of the scarcity of the male labour, and also because in certain processes, such as plucking, women are handier than men. The census population of a tea estate may vary from five hundred to two thousand persons, but sometimes only half of this number can be reckoned as efficient labour. Workers are encouraged to bring, and have settled with them, as many members of their family as possible. Most of the estates visited were short of labour, and employment is found on a tea estate for all members of a family who are willing to work, small children being sent out to catch caterpillars and other insects on the plants, old people being given light work inside the factory.

It is difficult to calculate the exact amount received as wages, since much is given in kind. Enquiries on a number of gardens appeared to indicate that, taken all the year round, the average wage of a man worker lies between Rs. 9 to Rs. 12, and of a woman from Rs. 4 to Rs. 9 a month. Managers pointed out that although the fixed daily wage of men is higher than that of the women, a woman who is a skilled plucker will earn more, so that her average total earnings for the year may equal or exceed those for a man. The workers did not usually work all the working days in the month. Children made a few rupees a month, the actual amount depending on their age and on the work on which they were engaged.

In addition to these cash payments, free quarters are provided for all workers, their families and relatives. It is also customary to provide a certain amount of land for the workers' own use and cultivation. The

rule as to payment for this land varies on different estates: on some estates the land is given free of rent to workers of over a year's standing; in other cases a small yearly payment is charged which is less than the value of land. Workers are thus able to grow much of their foodstuff. Firewood on many tea estates can be obtained for the gathering. There is no definite sickness benefit, but every effort is made to keep labour settled; therefore some sort of relief is usually given during sickness, according to the requirements and needs of the worker. On some estates maternity benefit is provided. It is difficult to estimate what it actually costs a worker to live. The highest estimate obtained was Rs. 6 per mensem.

Education A number of tea estates had made attempts, often through some missionary agency, to provide a primary school for their workers' children. It has been pointed out, however, that owing to the labour shortage there is work on a tea estate for every member of a family, and where schools were provided, the classes were only open at such hours when workers could not be usefully employed on the gardens. The attendance at these schools was poor and it was said that children who were working for many hours in the garden had no desire for school work in the evening.

Welfare In most of the lines on the tea estate there were signs of domestic comfort, and the workers looked well nourished and happy. Families feed together in their homes. Usually one member of the family does not go out to work, but cares for the home. The majority of workers belong to aboriginal tribes, and have few wants as regards clothing and education. Workers who have been on the estate for some years put their savings into land, and retire to neighbouring *bastis*, only coming to work in the gardens at intervals when there is no need for labour on their own fields. The lot of men and women workers when they first joined a garden after recruitment may be difficult, until they have had time to settle down. In many gardens it is customary to give coolies advances, to tide them over this period.

The Terai The tea industry in the Terai is older than in the Dooars, the gardens are smaller, and since the earnings are less, there is less money spent by the management on the estates and on the workers. Therefore the lands are less well kept and the factories less up-to-date; the workers also do not look so well or flourishing.

Very few accidents occur on tea estates. In the few cases that came to notice, the worker had been provided with permanent light work on the estate.

Accidents

Women, owing to the nature of their employment, are practically free from accidents ; very rarely a finger may be amputated in the factory, in the tea-cutting machine.

In the tea districts where the workers live in family groups, the type of house built depends largely on the origin of a worker. Hill folk prefer clay and bamboo huts, with an outside verandah and thatched roof. They also prefer their homes to be surrounded by a plot of land for cultivation, and their cattle and other domestic animals are kept near by. Plains folk like a *basti* arrangement, with several houses close together, their land for cultivation being some distance away. Their houses may be of clay but do not usually possess a verandah. More recent types of housing on certain plains estates consisted of iron supports with bamboo inter-woven between, and had galvanized iron roofs. These houses were hotter in summer than those with thatched roofs, but were said to give more protection in the rains. One of the reasons for the substitution of an iron roof was the scarcity of grass for thatching, and the recurring expenditure consequent on the renewal of a thatch roof.

Housing

In all types of housing a certain amount of ventilation is permitted through the walls, or between the walls and roof. The actual surroundings of the houses varied much even on the same estate ; some had an accumulation of rubbish round them, others were well kept by the occupiers.

On tea estates it is not customary to provide any sanitary conveniences. The reason given for such absence was that there was danger of upsetting the labour force who are ignorant and resent interference with their habits, and also that such provision would involve considerable expenditure. As a rule there is plenty of open land round the dwellings, but the incidence of hookworm disease among these people was said to be very high, and to lead to debility and loss of efficiency. On the hill tea estates considerable attention has been paid to the importance of preventing the spread of hookworm, by the provision of suitable latrine accommodation. The writer is of the opinion that the success attained has been largely due to the energetic publicity campaign carried out during recent years when Colonel Clayton

Sanitary arrangements

Lane, I.M.S., was in medical charge of the Darjeeling District. He organized and trained bands of workers (of the compounder class), who afterwards went about, and explained by means of open-air lantern lectures to the workers on different estates, in their own dialect, the treatment and prevention of this disease. On a number of tea estates latrines have been arranged in connection with each little group of workers' houses, and are actually in general use by the inhabitants. The usual type of latrine is a deep pit dug in the ground suitable for six months or a year's use, covered by a wooden platform. Bamboo and matting walls are placed around and the whole is protected by a thatched roof supported on bamboo poles. The pit is, when required, filled up and covered over with sufficient earth, and the wooden platform, walls and roof moved to another site. Among the hill tribes members of the sweeper caste are not to be found; there is, therefore, considerable trouble if night soil, etc., has to be removed. By the above arrangement this difficulty is overcome.

In the plains wells are sunk on different parts of an estate. They are rarely well placed from the point of view of elevation or drainage, nor are they usually properly protected or covered in. On hill estates drinking water is obtained from running streams, and the purity of the supply is variable.

The average woman worker looked healthy, but these women had real homes, and probably would not come out to work if unwell. Infants on the tea gardens were generally more healthy than in the mill-arcas, though a number had sore eyes (conjunctivitis). Difficulty is experienced on a tea garden in effectively treating an epidemic such as cholera, since the doctor in medical charge of the garden has no control over workers who live in neighbouring *bastis*.

The doctors employed on tea estates rarely possess a registerable qualification, the salary offered being too low to attract better trained men. It is, however, one of the recognized duties of each manager on a tea estate to take a personal interest in the health of his labour, since owing to the scarcity of labour and the cost entailed by recruitment, each worker on an estate represents a considerable outlay. Managers insisted on regular visits to the workers' houses by their doctor, and gave allowances to workers on the doctor's sick list. It was said that women

workers on the estates will not go into hospital, but the hospitals mentioned were in many cases open wards and there was no provision for the nursing and protection of women patients.

Work on a tea garden must on the whole be considered as a healthy occupation, and since a worker can do as much or as little as she likes, there does not appear to be need for special regulations with regard to employment before and after childbirth. Where maternity benefit is not given a worker can in most cases depend on sufficient support from her husband and family to enable her to rest for about a fortnight.

Maternity

A number of tea estates have recently introduced some form of maternity benefit. The amount given varies from Rs. 5 to Rs. 25 for a birth, part of which is usually given at birth and the remainder in instalments during the first year. Pregnant women are encouraged to register their names at the dispensary. Where maternity benefit is given, it is not conditional on absence from work. The writer found that women in normal cases stayed off work about a fortnight, but if the mother was not well, she might remain at home for two or three months.

Maternity benefits

On estates where maternity benefit is now being given, it was possible to obtain fairly accurate records. The birth-rate was apparently high, varying between 70 and 90 per thousand women of census population, but the age distribution of these women was not known. In cases where the benefit is given if the child is born dead, still-births are also recorded. For instance on one estate with a census population of about 1,500 workers, the registers for 1921 showed that 69 children had been born alive, and there were 8 still-births recorded.

Birth-rate

Deaths from puerperal septicæmia are recorded from a number of tea estates, and it is probable that many others are missed. It was clear that, under the present maternity schemes, on many estates, while the ante and post-natal periods were supervised to a considerable extent, the actual time of childbirth is left to relatives or untrained *dais*. On most tea estates there were a certain number of plains women who acted as *dais* when required. Their fees were lower than those charged near Calcutta, but usually not less than Re. 1 was paid. An indication of the economic value of women's labour on tea gardens was the fact that in many cases the same fee was

Assistance at child-birth

paid to *dais*, whether the child was male or female. Some of these *dais* were relatively cleanly in person, and had fairly successful results, others were dirty, and deaths occurred among the mothers attended. *Dais* regarded abnormal cases as foredoomed to die. Hill women on tea estates, according to the Nepali custom, are helped at the time of childbirth by their husband and a woman relative or neighbour.

Care of infants Women workers on tea estates took their infants with them on the gardens, the baby being carried in a basket slung across their shoulders.

Suggested improve- Even where the value to the estate of an industrial woman's
ments life has been recognized by the provision of maternity benefit and sickness allowance, much freedom from minor ailments among the women workers, fewer maternal deaths at childbirth, and fewer deaths among young children, might result from the employment of a nurse or health visitor by a group of neighbouring gardens, to work under their Supervising Medical Officer.

CHAPTER V

The Bengal Coalfield

Workers employed on the Raniganj coalfield belong to aboriginal tribes—Santhals and Kols—or are Hindus of low caste such as the Baurias, Bhuias and Dusadhs.

Colliery labour

Most of the labourers cultivate their own lands, and live in scattered collections of huts or *bastis*. They come to the collieries for work at irregular periods when their own fields do not require attention. They may work for one, two or three days in the mine and then return to their own homes. Shelter is provided for those who wish to rest at the colliery. A number of workers are willing to remain longer at the mines to work four or five days a week, and for them housing is provided. Such workers return to their fields for sowing and harvest and often at other times as well. The proportion of labour permanently settled on collieries is very small. Additional workers are badly needed but cannot be obtained. It is easier to get surface labour for loading, etc., above ground, than workers who will cut and carry coal in the mine. It is specially difficult to get workers during the seasons when agricultural work requires attention. Collieries employ recruiters who daily go round the surrounding *bastis* to try and persuade the workers to come in.

Aboriginal workers often come to work in a small group of men

Social life

and women, near relatives or from the same village. Physically they are healthy and well-developed. They would not come to work if ill, and those living on collieries return home when sick. Women who came for a few days' work usually said they had left children at home in the care of relatives, women who stayed for longer intervals on collieries often had children with them. The aboriginal tribes who live in their own *bastis* are said to lead very moral lives. Among Santhals a man undergoes severe penalties if he infringes the moral codes. It was stated that when Santhals get more civilized and live among other castes, their morals deteriorate. The Hindu workers also live in *bastis* and work under the same conditions as the aboriginal labour. They do not, however, attach the same importance to family life, and take less care of their children. Their women and children were on the whole less healthy. Those living on collieries

took young children into the mine, but children able to play about often remained above ground.

When workers on the collieries live in quarters provided by the owners, the house was usually from a sanitary point of view satisfactory, though it might be a "katcha" building. The Asansol Mines Board of Health have laid considerable emphasis on workers' dwellings, and on the Bengal coalfield many owners have provided quarters which conform to their requirements. The average building has brick walls and a tiled roof, or is built of masonry with plaster outside; there are adequate ventilation openings, and there was no evidence of overcrowding. The houses are provided free of rent, and usually there are more quarters available than workers to occupy them.

In coal mines women work together with men; they usually spend about five to eight hours down the mine. This period may be at any time in the night or day. Men cut the coal and women carry it to the containers or tubs; the proportion of men to women underground is roughly three to two. Workers are paid by the number of tubs filled, and a woman's share of the pay for a day's work varies from 8 to 12 annas. If the coal is very hard, or has to be carried a long distance for loading, higher rates may be paid. Weekly markets are held in convenient areas, under the supervision of the managers of works, where food and goods are sold at reasonable rates.

Conditions of labour underground are laid down by the Inspectors of Mines. A few mines in this district contain a high percentage of dangerous gases, and must of necessity have adequate artificial ventilation. Safety lamps similar to those employed in England are in use. Mines are entered by a shaft, or, if shallow, by an incline. In the wide main galleries there is free ventilation, but women who have to carry coal for men engaged in opening up a narrow gallery may have to work in an atmosphere where there is little movement of air and the air is vitiated by smoke from primitive oil lamps. In a few mines manual labour is being replaced to a considerable extent by the use of coal-cutting machinery and men as well as women may then carry coal. On many large collieries owing to the shortage of labour every effort is being made to reduce the distance of coal carrying by the provision of trolley lines to bring the tubs

within convenient distance of the workers. Such facilities are not found on small collieries, which have not so much capital behind them. In these mines a woman may have to carry a basket containing a load of 60 to 80 lb. a considerable distance (200 yards) and up a steep incline. No special arrangements were made regarding compensation for accidents. In mines the chief accidents to women was said to be the injuries to their feet.

There was no organized sickness benefit, but in certain collieries the writer found it was the custom for a small sum, about three to four annas, to be allowed weekly to workers who were ill in their *bastis*. The payments were made through the *sardars* who recruit the labour, and there was no evidence as to the actual sum which reached the sick person. A number of collieries give a small sum to workers on the birth of a child. This sum varies from annas 8 to Re. 1. Most collieries allow Re. 1 to the worker's nearest relative in case of an adult or infant death, to provide the funeral cloth.

In the iron, engineering, pottery, and other works on the Bengal coalfields the large majority of workers are imported. The lower grade workers are of much the same class as those met with in jute mills, while many of the higher grade skilled artisans came from Madras. In iron works where the rougher processes of the manufacture of pig iron take place, a certain number of very low caste workers, similar to those who are found in the mines, are employed. Engineering works have an eight-hour day for the majority of their more skilled workers, but those doing coolie work may have longer hours in certain cases. Certain processes at pottery works are carried on at night, when men workers only are employed.

The total number of workers employed in these industries depends largely on the state of trade. The proportion of women workers is relatively very small, they are of much the same class as the mine women workers, and work as coolies carrying coal or other material in not very large baskets, either directly in the open air, or in sheds with open sides under fairly satisfactory hygienic conditions. These women earn five to eight annas a day, for time work. The cost of living for coolie workers, when they did not live in their own *bastis*, was said to be five annas a day. In some industries a varying amount is allowed to workers who are off duty through illness. In one

large works five days' pay is given as maternity benefit to women workers on condition that the mother does not work during that time.

In certain other industries where imported labour was used there was but little privacy in the housing provided for the lower paid workers, and it was evident that they did not bring their real wives with them. The better paid workers in these works had a wall and small compound in front of their houses. These were appreciated, to judge by the remarks of the occupiers, and there were evidences of a real family life. At one large iron works the problem of suitable housing for bachelor workers was being considered. It was not advisable that these men should board with married families, for then there was often trouble with the wives, yet if these men lived alone they did not have time to cook proper food, got ill and were discontented. To meet the special needs of such men, an endeavour was being made to provide a woman cook for a group of bachelor men living together.

On the coalfields in some places tube wells had been sunk, in others tank or river water is drunk. The Chief Sanitary Officer to the Asansol Mines Board of Health has under him a staff of sanitary inspectors, through whom he supervises the general sanitation of the collieries in his district. Latrines are not provided for workers at collieries. There was rarely an adequate sanitary system in connection with the other industries on the coalfields. Where septic tanks were being installed, the type was copied from the usual type in jute mills, with similar disadvantages.

There was no evidence of miners' nystagmus among the mine workers in Bengal. This may be due to the fact that the majority of workers are agriculturists by profession, and do not work continuously in the mines. Nor owing to the depth of the seams of coal, do they work in a strained position.

Owing to the irregularity with which many coal workers come to the collieries they could not be said to receive much medical relief, except in the case of accident, from the unqualified doctor retained by the company.

If a well-run dispensary were attached to collieries where labour is housed for some months in the year, judging from the results of medical work among the same class of labour in other districts, workers would probably learn to accept medical aid on the colliery

for minor ailments instead of giving up work and returning to their own homes. In some other industries on the coalfields dispensary registers were not clearly kept, and it was not stated whether the patient treated was a man or woman. The remarks made regarding the attendance of women at mill dispensaries apply also to women in these areas.

Owing to the irregularity with which women come to work in the mines no definite information could be obtained regarding the birth-rate. The sources of fallacy in death registration among the population concerned exclude the possibility of any comparative statement of puerperal mortality among industrial women workers, and one can only state in general terms that one not infrequently heard of deaths among women workers during childbirth.

The women workers who live in *bastis* belong to agricultural families. They apparently had adequate support at the time of childbirth in their own homes and stayed away from the mines for two or three months. They received help at childbirth from women of their own people and payment for this assistance was in the form of rice or foodstuff. None of the indigenous *dais* appeared to have had any outside training. In no case did they own a pair of scissors, but used the ordinary household knife, or in the country the sickle to be found in each home.

The Chief Sanitary Officer to the Asansol Mines Board of Health employs two midwives to work in his district. Some of the cases taken by one of these midwives were followed up and her results were satisfactory. During six months she had attended over 40 cases, mostly among low caste Hindus. It is to be regretted that the area over which she had to work was so large that she was unable to follow up her cases, and advise the mothers during the difficult early months of infant life. The need for the employment of additional midwives was evident.

The scattered homes and primitive customs of the workers on the Bengal coalfields, would make the provision of schools for the children of these workers a matter of considerable difficulty. There would appear, however, room for more schools in connection with the large engineering and other industries on the coalfields, where large numbers of imported labour and their families are brought together.

APPENDICES

I

Average daily number of persons employed in all industries registered under the Indian Factories Act

	Bengal	Madras	Bombay	United Provinces.	Punjab	Burma	Central Provinces and Berar	Bihar and Orissa	Ajmer-Merwara	North-West Frontier Province	Assam	Delhi	TOTAL FOR THE YEAR 1921
ADULTS													
Males . .	372,902	76,356	271,288	61,269	36,706	83,755	32,822	48,640	13,552	849	3,315	6,501	1,007,955
Females . .	56,224	18,938	66,226	5,714	4,692	7,713	18,297	7,785	1,095	29	608	275	187,596
TOTAL .	429,126	95,294	337,514	66,983	41,398	91,468	51,119	56,425	14,647	878	3,923	6,776	1,195,551
CHILDREN													
Males . .	32,822	4,569	11,639	2,148	975	753	1,783	1,484	192	1	275	279	56,920
Females . .	3,464	2,478	4,127	41	55	364	400	90	29	..	134	5	11,187
TOTAL .	36,286	7,047	15,766	2,189	1,030	1,117	2,183	1,574	221	1	409	284	68,107

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II

Average daily number of persons employed in the Bengal industries under consideration in this enquiry

—	Jute mills	Cotton mills	Coal-mining industry	Other industries on the coalfields	TEA INDUSTRY		
					Garden labour (Permanent)	Outside labour (Permanent)	Outside labour (Temporary)
ADULTS							
Males . . .	207,908	9,136	27,257	12,787	} 144,587	2,688	3,733
Females . .	44,705	1,550	15,930	2,784			
CHILDREN							
Males . . .	26,166	2,014	} 595 }	862	}		
Females . .	3,069	138		189			

III

THE FAMILY LIVES OF INDIAN WOMEN

If the provision of maternity benefit for Indian women workers were to be seriously considered, it would be necessary to have some information regarding the number of pregnancies which might be expected among a given number of Indian mothers. During the course of this enquiry certain figures were obtained and will be found mentioned in Chapter IV, but owing to the conditions of these women's lives, it was very doubtful if the full number of pregnancies were recorded. Information obtained by qualified medical women in different parts of India is accordingly attached for purposes of comparison.

Figures relating to an unselected population of women and children, from different parts of India

Place of observation	No. of women questioned	No. of pregnancies among these women	Children born alive	Children alive to date (1920)	CHILDREN BORN DEAD		
					Under 3 months (Abortion)	Under 7 months (Miscarriage)	Over 7 months (Still-birth)
BENGAL—							
Krishnagar	21	85	56	42	3	7	19
BERAR—							
Akola	20	166	148	77	7	5	6
BIHAR AND ORISSA—							
Bettiah	20	111	88	48	9	5	9
BOMBAY—							
Bombay	21	121	99	56	5	6	11
Karachi	19	103	90	52	3	3	7
CENTRAL PROVINCES—							
Bilaspur	23	93	83	55	3	5	2
CENTRAL INDIA—							
Indore	33	190	179	59	5	3	3
Nagpur	20	114	97	57	5	7	5
Neemuch	20	194	185	62	2	4	3
DELHI—							
Delhi	20	119	108	40	8	1	2

*Figures relating to an unselected population of women and children,
from different parts of India (concl'd.)*

Place of observation.	No. of women questioned	No. of pregnancies among these women	Children born alive	Children alive to date (1920)	CHILDREN BORN DEAD		
					Under 3 months (Abor-tion)	Under 7 months (Mis-carriage)	Over 7 months (Still-birth).
GUJERAT—							
Surat	20	137	104	49	17	9	7
HYDERABAD (DECCAN)—							
Hyderabad	24	218	186	86	13	12	7
MADRAS—							
Madras	24	167	141	62	5	13	8
Guntur	17	83	68	46	7	4	4
Vuyyuru	25	144	131	90	3	4	6
PUNJAB—							
Ambala	10	60	44	20	8	7	1
Ludhiana	16	89	68	42	5	14	2
Lyallpur	12	44	42	31	3	..	..
Sialkot	19	74	60	40	4	7	3
Simla	20	142	122	68	4	10	6
UNITED PROVINCES—							
Bareilly	20	172	157	80	7	3	5
Benares	20	173	151	47	10	8	4
Cawnpore	19	87	66	24	5	11	5
Lucknow	21	104	85	49	5	11	3
TOTAL	484	2,990	2,558	1,282	145	159	123

These figures were obtained during the course of an enquiry financed by the Countess of Dufferin's Fund.*

* *Indian Journal of Medical Research*, Vol. VIII, No. 2, page 366, October 1920, Curjel, Dagmar F., "The Reproductive Life of Indian Women."

IV

Scheme for the medical care of women workers in a group of jute mills

Estimated expenditure	Rs. 1,000 per month (Rs. 12,000 per annum)	
	Per mensem	Per annum
	Rs.	Rs.
Health Visitor, Rs. 250—25—350	300	3,600
Conveyance allowance	100	1,200
3 Resident Midwives, each Rs. 80+Rs. 20 conveyance per month.	300	3,600
* Attendants, etc., for crèches	100	1,200
* <i>Dais</i> classes	40	480
* Bonus to <i>dais</i> for each labour successfully conducted, say 120 births per annum at Rs. 2 each.	20	240
<i>Dais</i> outfits	...	20
* Materials for sewing class, babies' clothes, posters, lantern slides, etc.	40	480
TOTAL	...	10,820
To meet additional expenditure under items marked *.	...	1,180

N. B.—In the above estimate are not included—

- (1) Cost of quarters for the Health Visitor and three Resident Midwives.
- (2) Drugs, dressings, etc., which could be supplied when required from the existing mill dispensary by the mill doctor.

SCHEME OF WORK

The work would start with the appointment of a Health Visitor; she would be a trained nurse-midwife, who was in addition a certified Health Visitor. Thus in addition to knowledge of maternity work in a hospital, she would have experience of working in an Indian city, among Indian women and children in their own homes, etc. Health Visitors are trained at the Health Schools at Delhi, Lahore, Madras and other centres.

It would be her duty to engage three suitable resident midwives, place them in the different mills, direct and supervise their work. Midwives are trained at any large Indian Maternity or Women's Hospital.

The Health Visitor would probably find it best to start work quietly in a room near the mill doctor's dispensary. Her work is chiefly preventive and not to diagnose or treat cases, but she might be provided by the mill doctor with a few simple stock mixtures and dressings for minor cases, that the women workers might get into the habit of coming to her for advice and of knowing her. She would be able to persuade a woman needing serious treatment to go to the mill doctor, probably she would the first time herself take the woman to the doctor.

The Resident Midwives would carry out similar work under the Health Visitor's supervision.

The Health Visitor (and the Resident Midwives under her) would also get into touch with the *dais* or untrained indigenous midwives of the neighbourhood, who attend the mill women workers at their confinements. They would hold classes once or twice a week for these *dais*, for attendance at which the *dais* would be paid a small fee (annas four). Illiterate *dais* are taught by means of lantern slides and with models. Each *dai* who called in the Health Visitor (or resident midwife) at the time of confinement would receive Rs. 2 reward.

After the lapse of a year or two the Health Visitor would probably be in touch with the best *dais* of the neighbourhood and be able to recommend them to the pregnant women workers with whom she came in contact. These specified *dais* who would consent to improve their methods, would be given a simple outfit which the Health Visitor and Resident Midwives would keep under supervision.

(Experience may show that eventually women workers may consent to dispense with their *dais*, and be attended by trained midwives instead.)

The Health Visitor (and the Resident Midwives under her) would visit all puerperal cases and babies among the workers, and among any other woman or child who was ill in the mill lines and sent for them, and when necessary they would persuade the family to see the mill doctor.

When the Health Visitor has gained the confidence of the women workers, crèches in the mill compound for the care of young children while the mother is at work in the mill would be established. The children would be looked after by women attendants under the charge of the Resident Midwife. The Health Visitor would visit such crèches daily. If any child is found to need treatment, she will see that treatment is received from the mill doctor.

The Health Visitor and Resident Midwives would give simple health talks to mothers, and hold sewing classes at suitable times to enable women to make simple clothing for young children.

Special sewing classes might be held for girl half-timers, in connection with which health talks and lantern lectures would also be given.

In the case of a severe epidemic in a mill compound the Health Visitor and Resident Midwives would do their best to assist the doctor and carry out his directions, but ordinarily it would not be the duty of these women to attend infectious cases or male patients.

The Health Visitor has been taught to keep books and registers, she would submit a monthly statement of her own work, and that of the Resident Midwives, to the mill managers.

Such a scheme might need to be modified according to local conditions. The essential thing is the provision of a trained nurse to interest herself in the welfare of the mill women and their children.