

Original Articles.

REPORT ON PHYSICAL TRAINING IN THE BOSTON PUBLIC SCHOOLS.¹

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At a meeting of the Boston Society for Medical Improvement which was held in November, 1896, on motion of Dr. Walter Channing, it was resolved: "That this Society is in sympathy with the effort to secure the incorporation of a more thorough course of physical training in the course of study in the Boston public schools, through the action of the School Committee, and that a committee of three members of this Society be appointed by the president to report at an early day what steps are best calculated to promote favorable action by the School Committee." The president appointed as members of this committee Drs. W. Channing, E. H. Bradford and Wm. M. Conant.

The committee visited a number of schools of the primary, grammar and high-school grades in the city proper, and in the outlying districts of Dorchester, Roxbury, Charlestown, Allston and Brighton.

In the beginning it may be said that the committee had no definite idea of just how much or how little attention was given to physical training in the Boston public schools. If they had any opinion it was, perhaps, that the character of the work was rather meagre and unsatisfactory. They were aware of the earlier attempts that had been made, and of their final failure and collapse, and they were somewhat sceptical as to what they would now actually find.

It gives them pleasure to say that they were agreeably disappointed from the start, for they soon discovered that physical training as now being given under the direction of the present department to the public school children was founded on solid scientific principles in which unity, harmony and progression were apparent, and was being practically and successfully applied under a system of thorough, skilful and careful organization.

To lay out a plan on paper for an ideal system, and to put it into operation where the conditions are ideal, is not so difficult a matter; but to graft on to an institution of such conservative traditions as the Boston public-school system a branch essentially new, and at first sight not of apparent direct relationship, is a task of considerable magnitude. However good in itself, it must fit in with other subjects, and help and stimulate, rather than antagonize. It must prove its fitness not only as a part of general education, but as a positive educative force, before it can be regarded as having earned for itself a place in the school curriculum.

We believe that so far as physical training has been developed in the Boston schools it has been along these lines. The seed has been deeply planted; the roots of the tree have taken firm hold. Hand-in-hand with the other branches taught it is working harmoniously and beneficially. Everywhere the committee have gone they have been gratified to find the interest manifested by teachers and scholars. There may have been exceptions, but only frequently enough to prove the rule.

It is especially gratifying to find how thoroughly and carefully the teachers have taken hold. No system, however good, could succeed without this co-op-

¹ Read before the Boston Society for Medical Improvement, October 18, 1897, by Dr. Channing, as Chairman of the Committee appointed in 1896.

eration, and we must regard it as one proof of the excellence of the present system that this interest has been aroused. One evident reason why so much good work has been accomplished with the pupils is that they are reacted on by and share in the enthusiasm of the teachers. The committee are convinced that all the teachers of the schools must themselves be able to teach physical training if it is to have enduring vitality. They must feel it as a part of their personal work, and not something outside of, and alien to, themselves. Specialists to oversee and supervise there must necessarily be, but these should, when possible, be taken out of the regular school corps, and be experienced in the mental training and care of children. They will make all the better teachers of physical training if they have first had the other kind. Probably in every school one of the regular teachers, with a fondness for physical training, can ultimately be detailed to look after that branch and see not only that by itself it receives proper attention, but also that its harmonious correlation with other subjects is carefully preserved. It stands to reason that this important matter will best be understood by an all-round teacher. The teachers themselves will naturally need the instruction of the best specialists, who, however, should never overlook the pedagogical side of the work.

The present system, as understood by the committee, recognizes the need of regular instruction in physical training from the beginning of school life. To be of the greatest service it must begin early and be continued regularly each year to the end. Every year adds to its beneficial effects, both on body and mind, and it is not too much to say that it will have lasting influence on the health of the organism. Furthermore, we may look for the establishment of improved muscular co-ordination, which must result in more accurate and careful habits of mental action. It must not be forgotten that in as far as we are training the body to quick, active and regular responses, we are at the same time training the mind in a similar manner.

The Swedish system, as adapted for use in the schools, offers a great variety and diversity of exercises, and further enlivened with gymnastic games is unsurpassed for school work. But the committee wish especially to call attention to the need of apparatus in the higher grades of the work. The word "apparatus" formerly suggested many expensive appliances, but it is one of the very great advantages of the Swedish system that it requires comparatively little apparatus, and that of a simple and inexpensive character. Little by little the effort should be made to introduce some of this apparatus into the higher schools, until ultimately every boy and girl entering a high school can have the chance to make use of it. It is to be hoped, of course, that all new school buildings will have a large, well-ventilated and simply-finished hall for assembly purposes. In such a hall a few pieces of movable apparatus can be placed, occupying little room and not in any way detracting from its attractiveness. In the opinion of the committee, no better expenditure of money could be made for the health of the school children and for the promotion of the best interests of physical training than to introduce a few such pieces of Swedish apparatus into many of the present good-sized high or grammar school halls. The outlay in each school would be surprisingly small.

The Girls' Normal School may be especially mentioned as quite lacking in all facilities for teaching

physical training. The girls at the school, who are to go out as teachers, and have had perhaps several years of special instruction, are here deprived of every opportunity for work, except on the most meagre scale. This is in every sense deplorable, for it disheartens, and in some cases interferes with the career of girls who might become valuable specialists, and it also reacts unfavorably on their physical health. For the good of the schools, the normal school should, above all others, contain a large, well-equipped gymnasium, where all the girls may receive thorough and full instruction. The normal school building appears to be quite unfitted for its present purposes, and the committee very much hope the city may speedily have a better one. It is pathetic and depressing to see such a fine body of young women working under such serious disadvantages.

In nearly all the schools visited the gymnastic work is done under serious disadvantages, both from the overcrowded condition of the schools and the narrow and contracted arrangement of the rooms and corridors in all of the old and some of the new buildings. The crowding of the school-rooms is shown by the very narrow aisles between the desks. Most of these were found to be not more than sixteen inches in width, and in a number of schools not more than fifteen inches. It is manifestly impossible for large grammar-school girls and boys to properly go through arm and leg movements which require plenty of room in such a limited space. It is difficult enough for small children, who require less room, but they can manage it after a fashion. In some schools with fairly ample corridors the pupils take some of their exercises in them, which is in every way to be commended, but unfortunately the corridors are too cramped in most of the schools to make this possible.

The committee would suggest the desirability of increasing the width of aisles in all grammar schools to an average of at least twenty inches, and more would be better. This could only be done by removing one row of desks, but it would seem desirable to do this, whenever possible, not only to give more room for gymnastics, but also to promote better hygienic conditions. A smaller number of scholars in the school-rooms would be of very obvious advantage. In the primary schools a width of eighteen inches between the desks would be none too much.

The time allowed for gymnastics is at the present sixteen minutes daily. It is to be earnestly hoped that this length of time may in the future be considerably extended, so as to allow for a little work both in the morning and afternoon. It has been proved by Kraepelin and others that mental work is of a decidedly better character if there are periods of rest at certain intervals, and the committee believe that the school children would achieve better mental results if more frequent periods of physical activity could alternate with study periods. They would suggest the period for gymnastics be extended from sixteen to twenty minutes daily, the best use of this time to be arranged for by the director of physical training.

The need of more school buildings must become apparent to any one who visits the Boston schools, and they should be urgently prayed for until the necessity for them is at least recognized. They need not be ornate or palatial, if only they contain large and well-ventilated rooms and ample corridors. Simple and

not costly buildings would be of the greatest utility, if it were possible to erect such. In the meantime the committee would earnestly call attention to an adjunct of every good school, which may often be supplied with poor buildings. Cannot the city furnish grounds which may, for certain hours at least, be used by school children? A considerable part of their physical training can be given them in playgrounds.

Not to speak of outdoor gymnastic work, the number and variety of games, both for boys and girls, has largely increased during recent years. It would be of the greatest advantage if some plan could be thought out which would give all the children, at stated intervals, an opportunity to make use of playgrounds under proper supervision, as part of their regular school work. It would, of course, be most convenient to have these grounds adjacent to the school buildings, but where this is not possible the children could be sent to them at regular intervals.

SUMMARY.

To briefly recapitulate, the following are the chief points to which the committee take the liberty of directing attention:

- (1) The broad, comprehensive, and scientific character of the present system of physical training.
- (2) Its adaptability to the existing requirements of the school children.
- (3) The interest shown by both teachers and pupils.
- (4) The desirability of having all the teachers instructed in physical training, as on them depends the success of the work.
- (5) The desirability of selecting special instructors in physical training from the regular school corps, rather than from specialists inexperienced in general school work.
- (6) The desirability of selecting one teacher as a local representative of the department in each school to supervise and take the responsibility of making the gymnastics a success.
- (7) The due recognition of the importance of progression in the work from the beginning to the end of school life.
- (8) The Swedish system, with the addition of gymnastic games, is the best in regard to variety of exercises.
- (9) The necessity of apparatus of a simple character in high schools, and also in grammar schools to a less extent, if the system is to be adequately applied.
- (10) This apparatus can be placed in a hall without detracting from its attractiveness.
- (11) The lack of all facilities for teaching physical training in the Girl's Normal School, which sends a poorer grade of teachers of this branch into the schools than would be otherwise necessary.
- (12) The importance of obviating this defect by providing for the Normal School girls a well-equipped gymnasium.
- (13) The narrow, contracted aisles in the school-rooms, which probably do not average over sixteen inches in width, not allowing sufficient room for gymnastic exercises.
- (14) The desirability of increasing this width to twenty inches on the average, which could be done by lessening the number of pupils in the room, to their great benefit from a hygienic point of view.
- (15) The shortness of the time now allowed for the gymnastic exercises, which is sixteen minutes.

(16) The importance of increasing it to at least twenty minutes daily.

(17) The urgent need of larger and better playgrounds. New buildings should have ample grounds, but where children are obliged to attend existing schools with inadequate yard space they should, under proper supervision, be regularly taken to large playgrounds, and there have opportunity for exercise.

The members of your committee, as well as representatives of the Boston Homeopathic Association, appeared in June last before the "Joint Committee on Examinations and Hygiene and Physical Training," of the Boston School Board, and discussed the suggestions set forth above, there being entire unanimity as to the wisdom, not only of the changes recommended but others brought out at the hearing, such as those in reference to military drill, for instance.

At the meeting of the Boston School Committee, June 8, 1897, the following report was received:

The Joint Committee on Examinations and Hygiene and Physical Training, after hearing the petitions for an increased amount of physical training in the public schools, beg leave to submit the following brief report:

As the city becomes more densely populated the opportunities for normal and healthy exercise by children become less and less. A generation ago the boys and girls in most parts of the city were within easy reach of open lots, or suburban spaces, where they could play active games; but with the growth of the city this is no longer true, and it has become necessary for the schools to supply a want unfelt in the past.

The Swedish system of free movements in use in the primary schools is excellent as far as it goes, but it ought to be supplemented by a larger amount of physical training. This is still more necessary in the grammar schools, where the free movements alone are far from sufficient for the needs of the older children.

The additional time required cannot wisely be taken from the hours now devoted to study either in the primary or grammar schools; for the period of study in American schools is already shorter than that in the schools of other highly civilized nations, and the progress of the children in education is less rapid. There seems to be no reason, however, why in schools that have two sessions a part or the whole of the twenty-minute recess may not be profitably used for a system of games or light gymnastic exercises conducted under the direction of the teacher. The mental relaxation and the active movement, which constitute the real value of the recess, would be quite as great as they are at present.

Among the pupils in the high schools the need of physical culture is even greater. This is already supplied to some extent in the case of the girls by gymnastic exercises, which ought to be extended until in every high school there is a properly equipped gymnasium, and its use is a regular part of the curriculum. In the case of the boys the only physical exercise provided is that of military drill. Now it is the universal opinion of experts that the drill alone does not furnish the best kind of physical training; that it ought at least to be supplemented by regular compulsory work in a gymnasium. Such work might well be made preparatory to a somewhat abridged period of drill. A year, for example, might be devoted to it with great advantage, and every boy might be required to attain a certain standard of development before he is placed in the school regiment.

With a view to carrying out the suggestions embodied in this report the following order was adopted:

Ordered, That the Board of Supervisors, together with the Director of Physical Training, be requested to prepare and put into operation a plan for giving effect to the recommendation of the foregoing report.

Your committee understand that this order has been interpreted in a scientific and progressive spirit, and improvements and changes have been made in the system of physical training in the Boston public schools which will tend to markedly develop it in the right direction. If the gain that has been gradually made can be firmly held, and progress slowly continued along the same lines, there is no question that in the end, the public-school children of Boston will have physical training of a kind which will make them stronger and healthier citizens.

USE OF ANTITOXIN IN TWO CASES OF PUERPERAL SEPSIS.

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FOR the notes of these cases I am indebted to my friend, Dr. Allen Greenwood, of Waltham, who had them under his care during my illness.

CASE I. Multipara. Former confinements normal except the one preceding, which was followed by some pelvic trouble that kept her in bed for a long period.

On the morning of February 11, 1897, she was delivered of a child weighing eight and one-half pounds, position O. L. A., no perineal laceration and but little flow.

She was seen on the mornings of the 12th and 13th, and found in a normal condition. Was not seen again until the evening of February 14th, when she was found to be in a high fever, but with a good pulse, and feeling well and strong. The nurse reported that the fever had developed the afternoon before, accompanied by a severe headache. The lochia were not offensive and there was no tenderness about the pelvic region. The uterus, however, was soft and poorly contracted. An intrauterine douche of corrosive, one to five thousand, was given, and the uterine cavity packed with iodoform gauze. Quinine was ordered in moderate doses.

February 15th. This morning the temperature had dropped to 101°, with a corresponding diminution of the pulse-rate.

February 16th. There still being considerable fever, the douche and packing was repeated.

February 17th. Temperature down in A. M.; but in the P. M. it went up with a slight chill, and the patient began to show the effects of septic absorption in her facial appearance. The abdomen was much distended, and the bowels loose.

An intrauterine douche of peroxide of hydrogen and creolin was given, and an iodoform suppository and gauze packing inserted. Curetting the uterine cavity did not seem advisable on account of the extreme softening of the walls; then, too, several cases came to mind, where under similar conditions, the curette had been pushed through the uterine wall, causing severe peritonitis.

The treatment by intrauterine douches and application of iodoform suppositories and gauze was continued twice daily, with the free administration of quinine and brandy. In spite of this treatment the patient steadily grew worse until the evening of the 19th. She was then in a deplorable condition—delirious, with sighing respiration, cold hands and feet, pulse weak and compressible, and temperature