

Mental overstrain in Education

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Mental Overstrain in Education
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In venturing to bring before this Section a few remarks upon a somewhat trite subject, I must plead as justification the fact that notwithstanding much that has been said and written ^{in the way of} ~~by~~ men more experienced than myself, there still exist indications of a tendency to mental overstrain in certain departments of Education.

In the consideration of the subject it may be well to clear the ground by discussing the questions, (1) What is Education? (2) What is meant by Educational overpressure, or such pressure in Education as is likely to result in mental overstrain; and ^{finally} (3) To Enquire into the incidence, the etiology and the signs of such overpressure. A few words may follow as regards prevention and treatment.

To answer the question what is Education it may be useful to consider what it is not? With some so-called educationalists I fear the idea still lingers that it consists of cramming a mind with as much of as many subjects as possible. Our laughing philosopher Punctil has however very truly observed that "you cannot ladle grammar, arithmetic & geography into a child's brain as you would brimstone and treacle into his stomach"; indeed a smattering of philology will serve to show that the word

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Education means not "putting in" but "drawing out". And bearing in mind the physiological interdependence of bodily and mental development, we may say that true education consists in processes of training which will produce in a given individual the most favourable evolution ^{possible} of all the faculties both of body and mind. A rational educational system will of course recognize the fact that children are not cast in the same mould; that there are individual - often inherited - differences in each pupil's powers; and that to attain the best results, instruction must be adapted to idiosyncrasies and proportioned to varying capacities.

Moreover the comprehensive and far-reaching character of education must be borne in mind, including as it does - as Papez puts it - all "every preparation that is made in our youth for the sequel of our lives". From the medical standpoint, indeed, we shall reply in the affirmative to the query of Plato - "Is not that the best education which gives to the mind and to the body, all the force, all the beauty, and all the perfection of which they are capable?"

Overpressure in education may in brief be described as a neglect of the principles just set forth - a neglect which cannot fail to lead to mental over-strain. Thus a cast-iron code, imposing for each year of age a definite standard of acquirement, heedless of the varying capacities of children, could not fail to produce it. A disregard of physical conditions underlying mental evolution, & of critical epochs of development, (especially in the female sex),

affecting capacity for exertion, is another efficient cause. And the undue excitation of the unstable nerve cells of a child of hereditary heredity to such a pitch of activity as might be harmless in a normal child will in the case of the former be apt to constitute over-strain. "Over-pressure" indeed is not an absolute quantity, but has to be estimated in relation to the personal factor in each case. It may, therefore, be defined, in terms of educational work, as that amount which in a given case is likely to produce excessive strain of the physical or mental system, or both.

We pass now to the consideration of its incidence. Since 1870 every young Briton has been compelled to submit to educational processes of some description ^{or other} between the age of 6 + of 13. School attendance is however allowed to count towards a grant from the early age of 3, & in some schools there are what are called "babies' classes". Formerly the leading idea with regard to these babies & sucklings was that the function of school was to teach them to sit still, regardless of the incessant impulses to movement which characterises ~~all~~ healthy young animals. Charles Kingsley ^{long ago} ~~indeed~~ satirised the "foolish fathers and mothers, who instead of letting their children pick flowers & make cluck pies, as little children should, kept them always working, working, working - - - till their bodies grew small, & their heads were all turned into turnips with little but water inside". And in days not far

See
 Temple &
 Somers ~~or~~
 Health
 Vol. V. ~~or~~
 p. 342

disturbance, we know of hydrocephalus as an alleged product of mental overstrain in early years, and it is reasonable enough to conclude that where a proclivity to tuberculous exists, cerebral hyperaemia and the stuffy ^{atmosphere} atmosphere of schoolrooms may conduce to tubercular meningitis. To-day a more enlightened view obtains as to the treatment of Infants, and the Educational Department now officially directs ^{the} fostering of the spontaneous & co-operative activity of such scholars. The musical drill, kindergarten games & occupations, & other exercises now so much in vogue in Infant Schools are no doubt extremely beneficial, & with suitable safeguards the Infants in our elementary schools are better off than they would be at home. Though precocious children are sometimes injured by being pushed into prominence, it is not in the Infant Schools that we shall often meet with instances of overstrain.

Nor is that now always, I think, so much evidence of over-pressure in elementary schools for boys & girls as was noticed some two or three years ago by our distinguished Comptroller Sir James Crichton Browne. At that time he proved to his own satisfaction (if not to that of the ^{Sanitary} Department) that more than one-third of the children attending elementary schools in London suffered from habitual headache - (52.3 of the girls & 40.5 of the boys). He argued, moreover from the increased prevalence of nervous disease in children - and he cited in support of his argument the increase since the passing of the Education Act in the juvenile mortality

from Sarcophagitis, from diabetes, from Kidney
& Rheumatic diseases - (claiming these ^{latter} as
"diseases with marked nervous affections") -
From the frequency with which he had met
with Chorea, with Stammering & with Neuralgia
in school children examined, that overpressure
certainly existed in connection with compulsory
education in elementary schools. In those
days it would seem to have affected most
severely the ~~dull~~ ^{backward} children, classified by Sir
James Cockton Browne, as either "dull, stunted
or delicate"; The code requirements of that
date conducing to the whipping up of as
~~far~~ far as possible of all children to definite
age standards. Nowadays grants are no
longer made on the percentage of passes in
standards arranged according to age, but
after examination of the scholars by sample.
H. M. Inspectors are also authorized to ask the
Teacher to select a few of the best children for
examination in the several subjects, so that
the tendency now is not to ~~push up~~ ^{press} ~~forward~~ ^{run up}
the dull children, as to ~~push~~ ^{work} up the brighter
children to a point that shall dazzle the
Inspector. Unfortunately bright precocious
children are not infrequently the offspring
of a nervous stock, & it is just these that are
likely to break down under emotional excite-
ment & the pressure of an examination in
prospect. From all I have been able to gather
both from teachers & from the medical officers
of children's hospitals in London, it is this class
that furnish cases of ~~Chorea~~ ^{horeas} of school-headache,
of chorea, & other nervous affections, more

particularly about the periods of examination.

In secondary education the incidence of over-pressure would seem to be more marked in the preparatory schools ~~rather~~ than in the public & other schools for senior boys. This is probably an instance of the "survival of the fittest", & there is much reason to fear that not a few promising boys, approaching the trying epoch of puberty, are sacrificed to the method of competitive examination for entrance scholarships. I do not say that in schools for senior boys there is no over-pressure, but in the ^{great} public schools (& others following their methods) the tendency to brain-strain is counteracted by a goodly proportion of out-door exercise and physical exertion in the way of games. Happily schools of the type of D. Blimber, satirised by Dickens as "a great hot-house in which there was a forcing apparatus constantly at work, & mental green-houses were provided at Christmas, and intellectual apparatus all the year round" are not now so common as formerly.

With regard however to secondary schools for girls, I fear that it is impossible to speak with favour of the hygienic aspects of the system pursued in the ^{many of them} more advanced. In fierce emulation of methods formerly designated "propria quæ maribus", some at least of the High Schools for girls seem to have overlooked the physiological conditions ^{& necessities} of budding womanhood. It has been well remarked that "Puberty with girls is a period of profound nervous, & neuro-psychological import". Many a weak woman could, if she only knew, trace

back her weakness to an overtax at this period of life". It is most unfortunate that too often there is a tendency (for which parents equally with teachers are responsible) to subject to serious & exhausting study girls of from 12 to 15 years of age, just at an epoch when they should have the minimum of school-room work, & the maximum of out-door exercise & recreation. The rapid growth & development which occur at this period & the physical changes concomitant in the establishment of the menstrual function constitute a drain upon the girl's organism, leaving little reserve of strength for arduous mental exertion. What provision do we find in the actual curriculum of High School girls at this age? Four hours almost continuous work in the morning, exclusive of extra subjects in the afternoon, with from 2 to 3 hours preparation in the after-part of the day. And to this is superadded time necessarily devoted to the practice of music & other feminine arts. Where, on a winter's day at least, is proper exercise & recreation to come in? The Public School boy has at least 2 hours compulsory play (usually in the open air) of afternoons: it is the exception, I believe, at Girls High Schools to have anything so plebeian as a playground, & I know of one where a well-equipped gymnasium exists but is never used for gymnastic exercises properly so called. The morning interval, nominally of 10 or 15 minutes, is not usually spent in brisk exercise in the open air would be the case with boys, but in mulling

pens, or nibbling biscuits, or at the best in perambulating corridors with arms entwined around companions' waists after the manner of females. Is it to be wondered at that as the term proceeds, the roses ^{or} lilies have been used to associate with ^{English} Jurisprud^{ence}'s cheeks gradually fade & signs of nervous exhaustion show themselves?

Dr. W. Playfair remarked in a paper read at the last annual meeting of the Association that some High School mistresses seem to hold the view that in relation to education the menstrual function may be ignored, and he gives an instance in which ~~was~~ the "Head" of one of the principal & best known Colleges for Girls had written to the Medical father of a broken-down pupil for saying that they [i.e. the College Authorities], considered that "the menstrual function" was not of consequence, & that ^{it} was in abeyance for a time it came all right afterwards when the girls left school - a sentiment rather reminding one of the story of King Canby & the ^{of London} ~~the~~ ^{little!}

In these three points then, (1) excessive hours of study, especially during periods of growth and development; (2) deficiency of systematic outdoor exercise & recreation, & (3) disregard of physiological functions differentiating the capacity for work at certain times of ~~the~~ ^{the} girls compared with boys, I think the High School System needs amendment. In women's Colleges of the type of Queen's, Newnham, & the Royal Holloway there is more elasticity in the curriculum, & a certain safeguard against overpressure in the way of outdoor sports. Even here, however, there is risk in the frequently recurring examinations

T Marie Corelli well describes the aspect
of overpressure in the case of the poor little
hero of her "Mystery of the Altar". Of Lionel she says
that though only eleven years old, "there was an
almost appalling expression of wisdom on his
pale wistful features: the "thinking frown"
already marked his youthful brow -

These predisposing factors causes we have the exciting influence of over-stimulation of brain cells resulting in subsequent exhaustion.

Amongst symptoms noticed we may specify the following. In young children a weary, prematurely old look, to which the furrowed forehead, knitted brow, bagginess around the eyes, and pallor complexion all contribute. A general fidgetiness & irritability - sometimes muscular twitchings, especially seen about the angle of the mouth, are noticed, & there is a general want of tone about and balance about the muscular system so that the hand when extended assumes a feeble pose, & we may often see or feel fugie-twitches. In more severe cases actual justitations of the limbs occur, & the symptoms pass, especially with girls, into well-marked Chorea. Head ache is frequent, & an habitual attitude is with the hand pressed against the brow: Sleep is as a rule disturbed. With young children transient nocturnal hyper-pyrexia is not infrequent and night terrors sometimes occur. In some cases the tongue & lips are tremulous, & speech is stammering. There is as a rule evidence of digestive disorance, such as foul tongue & foetid breath: often we find a distaste for wholesome food, sometimes a perverted appetite, & an overfondness for sweets. In boys & girls pubescent boys & girls the neuroathenic symptoms tend to be more marked. Such as incapacity for sustained attention (Aprosexia), feebleness of memory, a tendency to answer exactly opposite to what is known to be correct (heteropneimia), memory &

(Nervous hysteria, sleeplessness or sopor, a want of pluck & general apathy. These symptoms are often associated with such physical signs as a sallow earthy complexion, anaemia, constipation & what has been designated "Anorexia Scholastica". Aversion to solid food in the early part of the day is a ^{frequent} symptom with a tendency to substitute tea for more nourishing diet; ^{as we have seen} but, it is not only from want, but frequently from want of appetite, that our over-pressed children go to school minus their breakfast. I have myself had the opportunity of watching a High School Girl, naturally of good physical as well as mental development, whose morning appetite, vigorous at the beginning of term, becomes small by degrees & miserably less as work presses & the examination epoch approaches. And on enquiring as to the causes of breakdown of the student at the women's college referred to I found that though the principal meals were served in Hall, the more studious were apt to skip these ~~more solid~~ meals, & whip up their flagging powers with tea, made (ad lib) in their own rooms.

Nerve-Excitation

A few words on prevention & treatment must close this paper. As regards prevention much rests with the parents themselves who are but too apt to shift responsibility & throw all blame upon the teacher. The poorer classes have indeed but little option as to the ~~various~~ sort of education to which they will subject their children, the Education Department acting the part of Providence in prescribing the curriculum. But it has not always been a wise Providence, & its decess might have been at times more judicious had it been able to avail itself of the assistance of a medical adviser. It is

A hopeful sign that many of the larger School Boards have appointed Medical Officers, & as their oppor-
 -tunities & influence increase we may look for an
 improvement not only in the hygiene of schools but
 of educational systems. Parents of poor children ^{should} ~~may~~
 however themselves make a vigorous stand against
 homelessness & undue detention, the most common
 causes of overpressure in elementary schools. As regards
 secondary schools parents have more in their own
 hands. It is indeed hard to resist the fashion of the
 day, but it is clearly the duty of medical men to protest
 against anti-physiological practices in schools
 of education. Parents who know, or who are advised,
 that their children are of unstable nervous temperaments
 must beware of the dangerous strain of competitive
 examinations in such cases, especially at critical epochs
 of blood-pressure. Much may be done in favorably
 regulating the home environment of children attending
 day schools, in the way of ^{nutritional} ~~regulation~~ of meals, in-
 tenses on insufficient but don exercise & ample home
^{a person's meals are made of some to bed early}
 of rest, of course with overstrain as everything else
 the rule of action should be "Obsta principii", and
 warning signals, however slight, should not be disregarded.

The condition precedent to successful treatment
 is naturally the withdrawal of the pupil from conditions
 known to be injurious, even at the loss of a term's schooling.
 It ^{brain} ~~is~~ ^{is} not always time wasted; & to wait
 for the full development of threatening symptoms
 is gutuous policy. Dr. Octavio Sturges gives (in
 a paper read at the Intern. Cong. of Hygiene 1891 ^{PROG.} VOL. 10, 1
 p. 20)
 the pitiable history of 5 cases of what he designated
 as "School-bred chorea". These poor children having
 been kept with their "noses to the grindstone" in spite
 of morbid restlessness, the significance of which was

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Further

Not appreciated by the Teachers, were only removed when St. Vrain's Dance had developed so fully as to render them absolutely incapable of school-work & sometimes even of speech. But they been worse of the "hand-test" so easily applied, timely relief might have been given & the worst symptoms avoided. As to treatment, one may say in a general way use all means that will invigorate the body & cheer the mind. "A change" is often recommended, but let it be a change with an object, for nothing is worse in mental distress than inactivity and leisure for morbid introspection. Physical exercise in some congenial form & taken in moderation (e.g. bicycling, bowling, tennis or skating) may be of great value in restoring the balance of the circulation. A course of light literature is frequently of advantage; & an interest in manual work, such as wood carving, or (what is still better) some out-door occupation such as gardening is of signal service. Time does not permit of the discussion of drug treatment the indications for which will vary in different cases; but as a rule it may be said that having quickened the sluggish excretory functions by due purgation, & broken bad habits of insomnia by a short sedative course of Subphonal & Ferri-chloride, & ergonine & verine tonics are of value. Nutrition being often much impaired, a course of massage & feeding on the Dickinson diet system may be of service in extreme cases, and as a rule the administration of Cod-liver oil, maltine or is beneficial as conducing to that comfortable condition of body which according to Dr. Clouston & other preceptors of evangelists of the Gospel of Fitness is distinctly favourable to mental contentment.

