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THE HEALTH OF THE SURVIVORS OF THE WAR.

WHAT has been the average effect of their military service upon the health and longevity of the men who constituted the armies of the United States and of the Confederacy in the war of 1861-65? Every one knows what this effect has been upon some of the survivors; that the direct or indirect result of their wounds or of disease contracted in the service has caused death to a large number, and has produced more or less physical disability in a much larger number, as is shown by the rolls of the Pension Office. But what proportion of the whole number is formed by those whose lives have thus been cut short, or who remain and are more or less dependent upon the care of others? And what has been the ultimate effect of their campaigns upon the large number of men who were neither sick nor wounded when they were mustered out?

It is now a quarter of a century since they left the regimental colors and returned to civil life—a period quite long enough to permit the effects of their military service to have become fully apparent, if it were possible to obtain the data required to answer these questions. In this country, however, our statesmen and legislators, whether State or National, have not as yet, as a rule, formed so high an estimate of the interest and value of human health and life as to induce them to take steps to have records kept of these matters. Vital statistics are not considered in the national book-keeping, and only half-a-dozen States have anything approaching complete records of deaths; while nowhere are there to be found any State or municipal records of the annual loss by sickness. The army and the navy, the police and the fire departments of some cities, and possibly a few manufacturers find it worth while to keep an account of the time lost by their employees on account of sickness or accidents, but nothing of this kind has yet been attempted for the great mass of the producers of the country. Even in the efforts to obtain statistics of labor, which are now being made by the National Government and the several States, no data seem yet to have been obtained with regard to the amount of time

lost by working men and women on account of ill-health or injuries, although this would seem to be an important item in the comparisons of wages earned in different occupations, in different seasons and in different localities, as well as in the relative cost of production of different articles of food or of manufacture.

In attempting to answer the question, What has been the effect of military service on the health and longevity of the survivors of the war, it is, therefore, impossible to furnish definite and conclusive statistical data, and the best that can be done is to set forth opinions based on limited knowledge.

Probably the general view which prevails among those who have given any consideration to the subject is that the exertions, privations, and anxieties of military service during the war must necessarily have lowered the vitality and diminished the power of resistance to subsequent exposure and causes of disease of those who were subjected to these influences, even though no signs of this deterioration were shown at the time of discharge, or for years afterwards. This theory is strongly insisted on by pension-claim agents, who are prepared to show that almost any case of disease occurring in the veteran, even if not until twenty years after the close of his military service, must be due, in a greater or less degree, to injury to his health produced in the service, or, in other words, that such occupation necessarily damages the human organism to some extent. The fact that most physicians did not agree with this view made it necessary to pass the Act of June 27, 1880, by which the requirement of evidence that the disability was contracted in the service is done away with.

On the other hand a certain number of physicians and sanitarians are of the opinion that a great number of the survivors of the war were improved both mentally and physically by their service in the field, and that, among those who now survive, the expectation of life is quite as great as, if not greater than, that of other males of the same age living in this country under like circumstances. In favor of this view it may be urged that in almost all respects and at almost all times the life of the soldier during the war was more favorable to the production of a strong, well-proportioned body than the life of the average citizen. The soldier had the benefits of a life in the open air; benefits so great that only those who have for a time enjoyed them and have then for a time been deprived of them can fully appreciate their value, and which of late years some of our most distinguished physicians seek to secure for many of their patients by recommending

camp-life in place of drugs as a course of treatment. The soldier has regular exercise, bringing into play the muscles of body, chest, and limbs, and tending to produce greater lung-capacity, a larger and more powerful heart, and a comparative indifference to minor changes of weather and to diet, constituting what we call a healthy organism; which, be it remembered, is not merely an organism that is not sick, but one which is capable of doing its work with vigor and comparative enjoyment without being bound down by the strict rules of diet and mode of life which are requisite for the invalid. No form of mechanical labor, and still less of clerical or mercantile employment, is so well adapted to secure these ends as the systematic training of the body produced by military drill and discipline. It is true that in some cases there are special dangers connected with these, and that drilling and marching in badly-adjusted accoutrements, which unduly compress the chest and waist, may produce some serious heart troubles, of which the physicians of the great rear-army hospitals had abundant evidence during the first three years of the war. But upon the whole it is probable that the good effects produced by drill far outweigh the evil. As regards food, clothing, and shelter, the soldier of the Northern army was, as a rule, well supplied, from the sanitary point of view. The allowance was not luxurious nor always comfortable, but it was sufficient, and quite as well calculated to maintain and promote health as that used by the average citizen.

Bearing in mind these two opposing views, each of which embodies a certain portion of the truth but not the whole truth, let us see what conclusions may be drawn from such incomplete and imperfect data as can be found bearing on these points.

The total number of enlistments and of commissions issued in the United States Army during the late war was about 2,800,000. Many of these, however, were enlisted or commissioned more than once, and the number of these is unknown. Dr. Ainsworth, the Chief of the Record and Pension Division in the War Department, estimates 2,128,948 as the number of individual soldiers serving in the war, which is probably, if wrong at all, slightly in excess of the true number, which in round numbers we may put at 2,100,000. The greatest number of men in the service at any one time was about 1,000,000, in 1865. The number of deaths during the war was 359,528, of which 67,000 were killed in battle, 49,205 died of wounds and injuries, 225,791 of disease, and 17,532 of other or unknown causes. The annual ratio of deaths during the war was about 88 per 1,000 of average

aggregate strength, of which deaths, 33 were due to injury, and 55 to disease. The number of veterans surviving on the first of June 1890, as shown by the special count made by the census officials, was about 1,100,000. Some of the veterans are living in other countries, so that the actual number is in excess of this. In his last report, the Commissioner of Pensions estimates that 1,208,709 are still living. From these data we may compute the average annual death-rate of the veterans since the close of the war as having been between 13 and 14 per 1,000. This is also the death-rate for the last twenty years among those veterans who have been receiving from the Medical Department a special allowance every five years on account of the loss of a limb. The death-rate of males between the ages of 35 and 54 in the State of Massachusetts is 12, in New Jersey it is the same, in Boston it is 15, in Brooklyn 16, in New York 17, per 1,000. The death-rate among the veterans was greatest during the first ten years after the war, when the most severely injured or diseased were eliminated; during the next ten years it fell to about 6 per 1,000, if the figures of the 9,000 men on the artificial-limb pensioners' roll may be taken as a guide; and since then it has been increasing in the usual ratio with advancing age.

Upon the whole, such imperfect data as we have indicate that the average death-rate among the survivors of the war for the last twenty years has been a little higher than that of the average population of males of the same age. Theoretically it may be argued that the average expectation of life of the veterans now living should be somewhat greater than that of the rest of the male population of the same age, because the weakly ones and those especially injured by military service should have by this time disappeared.

When the records of the eleventh census are compiled, we shall have some interesting data bearing on this point. At present I can say only that from an examination of these data for a single State, the above theory does not seem to be sustained. In the State of Massachusetts, about 40,000 veterans were reported as living on June 1, 1890, forming about one-eighth of the white male population over forty years of age. Hence if they were equally healthy, the number affected with disease should be about seven times as great among the latter as among the former.

The following table shows for certain forms of disease and disability the number of cases found in white males over forty who had not been in the military service, the number of cases which should have

been found among the veterans according to the above ratio, and the number that were actually found:

Character of disease or disability.	No. of cases found in white males over 40 years of age not veterans.	No. of cases which should have been found among veterans on a ratio of one-eighth.	No. of cases actually found among veterans.
Consumption.....	292	41.5	89
Diarrhoeal diseases.....	114	16.3	910
Diseases of digestive system.....	309	44.1	188
Paralysis.....	1,106	158.	292
Other diseases of nervous system..	396	56.5	113
Diseases of heart and circulatory system.....	587	83.8	544
Diseases of the kidney and urinary organs.....	654	93.4	353
Diseases of respiratory organs.....	768	109.5	363
Rheumatism.....	2,443	320.4	1,627
Other diseases.....	770	110.	461
Total.....	7,439	1,033.5	4,940

These figures are only approximate, but they indicate that the proportion of sick men is at least four times greater among the veterans than it is among other males of the same age. Among the insane, however, there were 1,487 white males over forty not veterans, and only 156 veterans, while according to the above ratio there should have been 212.

The relatively great prevalence of diarrhoeal diseases, of rheumatism, and of heart disease among the veterans might have been anticipated, but some of the above figures are rather surprising. They are, however, to some extent, confirmed by an examination of the causes of death of 511 veterans in Ohio, from which it appears that consumption caused over 13 per cent, heart disease 16 per cent, kidney diseases 7 per cent, and diarrhoeal diseases 5 per cent of all the deaths, being much larger ratios than are found for other men of like age.

From these figures we must conclude that while the health of some men has been improved by their military service during the war, even to the preservation of lives that would have been lost had the owners remained exclusively in civil life, the health of the average veteran has been deteriorated by his service; and that he suffers more from illness and has a somewhat less expectation of life than other men of his age. This conclusion, based as it is upon an examination of the census data for a small part of the country, is a provisional one only, and we must wait for more complete compilations to give definite and reliable figures.

Previous to examining these census figures, I had formed a more favorable impression of the present health of the surviving veterans of the Northern armies; this impression having been derived in part from personal acquaintance with a large number of them who are still in the United States service in various Departments of the Government, in part from conversations with physicians from different parts of the country, and in part from my knowledge of the death-rates of those pensioners who are receiving special allowances for loss of limbs. It may be said that the replies made to census enumerators as to sickness and disability would probably be more likely to take into account minor pains and disorders when given by or in regard to veterans, and especially pensioners or applicants for pensions, than when made by or about other men, and also that they would be more willing to report certain forms of disease; but, making due allowance for this, the figures for sick and disabled men over forty years of age in Massachusetts indicate that the old soldier is worse off as to physical health than other men of his own age.

With regard to the Confederate veterans, the data available at present are more scanty than those for the United States service, but the records of death of 474 ex-Confederate soldiers in the State of Georgia, during the census year, as compared with the records of death of 2,150 white males over forty years of age in the same State for the same period, indicate that there was less difference in the proportion of deaths from consumption, heart disease, and diarrhoeal diseases in the two classes than existed in the deaths above referred to as occurring in Ohio. The figures are, however, too small in either case to permit the drawing of reliable conclusions; and, until we have before us the number of living veterans of each service, by groups of ages, for the whole country, with corresponding figures for the rest of the males over forty years of age and for the deaths in each class occurring during the census year, we cannot determine the relative tendency to death in the Northern and Southern veterans.

As regards those veterans who have been and now are on the pension-rolls, it seems very desirable that the information contained in the records of the Pension Office should be classified, tabulated, and published in such a way as to be most useful to those whose business it is to legislate on this subject, to those who are interested in vital statistics and life insurance, and to the medical profession. It is evident that the records of the results of disease and injury in nearly a million of men, extending over a period of more than a quarter of a

century, must contain data of great interest from sociological, sanitary, and medical points of view such as probably exist nowhere else in the world.

We want to know, for example, the annual death-rates among the pensioners since the war with distinction of quinquennial groups of ages, and with the further distinction of color and of the principal nationalities, such as native Americans, Irish, Germans, which would give us the means of calculating the expectation of life among these different classes. We also want information as to the results of different classes of diseases and injuries through a series of years, of chronic diseases of the lungs and digestive organs, of sunstrokes, of injuries of nerves, of loss of limbs, and the like.

This information is of practical importance not only to those who have suffered from these results, and to those who are daily called upon to advise and treat those affected with such diseases and injuries, but to every one who is liable to be so affected in the future, - in other words, to every citizen of the United States. At present this information is inaccessible to the medical profession and to the public. It exists only in the form of individual records, certificates of physicians, reports of medical examining boards, and the like, all which must be collated and tabulated in order to make them practically available and useful.

No doubt the present force of the Pension Office is inadequate to undertake this work in addition to its present duties; and Congress should, therefore, authorize for this purpose the employment of men fitted to undertake it, and provide for their payment and for the publication of the results obtained by them.

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