

FINDINGS OF SELECTIVE SERVICE EXAMINATIONS¹

G. ST. J. PERROTT²

THE average rate of rejection for physical and mental reasons of persons examined under Selective Service up to February 1, 1944, was about 45 per cent, compared with a figure of about 30 per cent during World War I. Because of a variety of factors it is impossible to appraise the two rejection rates in terms of the relative physical status of young men then and now. Differences in age composition, in examination standards, and in technique of the examining physicians make comparisons difficult. Furthermore, in the last war, all men were given physical examinations before classification for deferment. In the present war, physical examinations were given only to those young men who had no dependents or other reasons for deferment. This procedure may have tended to concentrate among examinees unemployed persons and others who might be expected to have a larger proportion of physical defects than the average.

Perhaps the most that can be said in comparing the gross rejection rates of the two wars is that there is certainly no evidence of any improvement in the physical status of young men since World War I.

Comparisons of the relative importance of different causes of rejection in 1917-1918 and today are of interest. In the charts, these have been set down in as comparable a form as the data permit. Figure 1A (1) gives the percentage of 2,700,000 men placed in class 4-F up to February 1, 1944, that were rejected for different causes and Figure 1B (2) shows the same information for the "second million" in the draft during World War I.

It will be seen that mental disease ranks first as a cause of rejection

¹ Published by permission of the Surgeon General, U. S. Public Health Service.

² Chief, Division of Public Health Methods, United States Public Health Service.

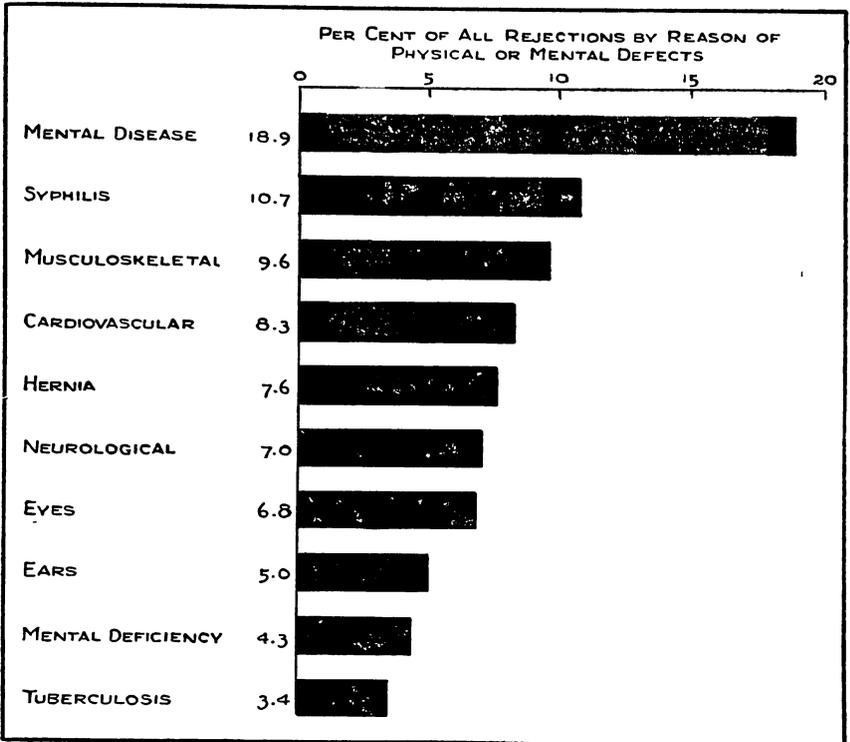


Fig. 1A. Rejection for physical or mental defects: Ten leading causes, as of February 1, 1944 (preliminary).

today but was tenth in 1917-1918. "Flat feet" which ranked high as a cause of rejection in World War I does not appear among the first ten causes today. More importance was attached to "underweight" in the last war than today.

It will be seen that the principal causes of rejection are much the same today as in 1917-1918. Among the first ten causes of rejection, there are only two types of defect which do not occur in both lists. These are defects of the feet which ranked high in World War I and syphilis which was second as a cause of rejection up to February 1, 1944, but did not appear among the first ten causes in 1917-1918.

Rejection rates for mental disease are obviously many times higher today than in World War I. The difference is largely in the psychoneurotic disorders, classed as mental alienation in the last war.

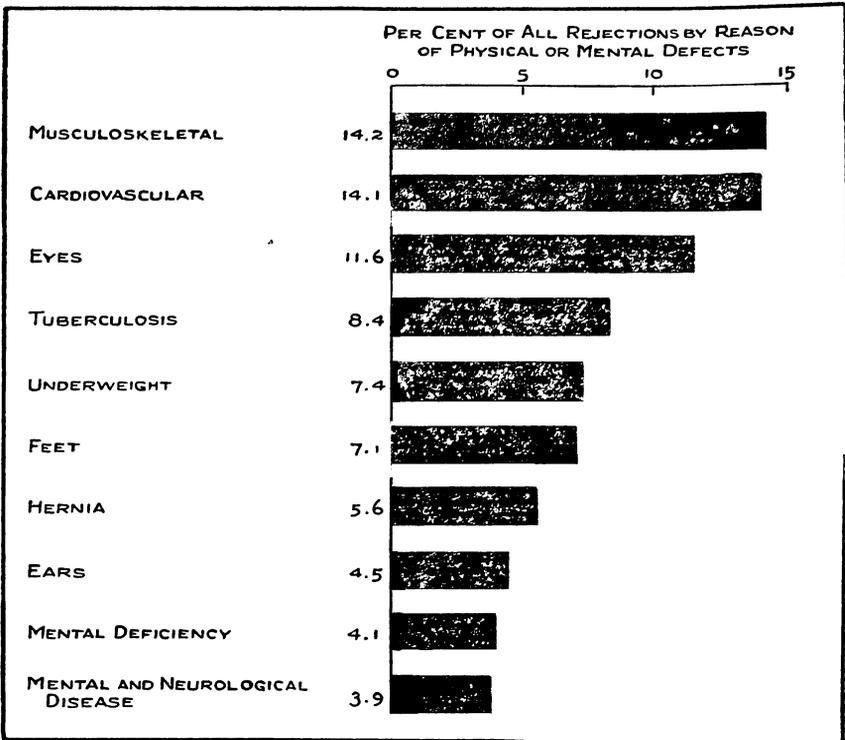


Fig. 1B. Rejection for physical or mental defects: Ten leading causes in World War I.

Rejections for mental deficiency and epilepsy, for example, were about the same in both wars. One reason for the higher rejection rate for psychoneurotic disorders is that these conditions have been found to constitute a very important cause of disability in the armed forces and consequently a concerted effort is being made to screen out such cases prior to induction.

In the early period of Selective Service operation, syphilis was a much higher cause of rejection than in the last war—23 per 1,000 men examined as compared with around 3 per 1,000 men in 1917-1918. With reduction in standards so that all uncomplicated cases of venereal disease are admitted, syphilis rejection rates are now running about the same as in the last war.

In the case of tuberculosis, the early results of the present draft

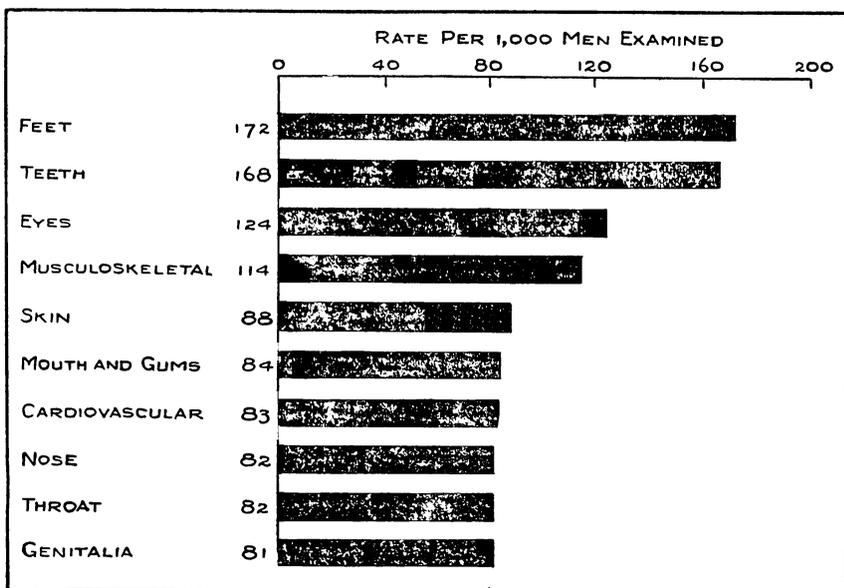


Fig. 2. Prevalence of defects. Ten most frequently recorded defects (broad groups) among 121,700 registrants 21-35 years, November 1940—September 1941.

seemed to indicate that rejection rates were about the same as in the last war, that is, about 2 per cent of all men examined. This was rather surprising in view of the fact that the death rate of young men in this age group had declined by two-thirds since 1920. The phenomenon was attributed to the fact that x-ray diagnosis was being used extensively in Selective Service examinations at the present time and that hence a better case-finding job was being done. Later results of Selective Service examinations, however, indicate an average rejection rate of slightly over 1 per cent or about one-half that of the last war.

The data in Figure 2 are of interest as showing the prevalence of defects found among young men examined between November 1940 and September 1941, whether or not the defect caused rejection (3).

Defects of the feet ranked first, being found in 17 per cent of all men examined. These were largely flat feet of varying degrees.

Tooth defects ranked second. These were a high cause of rejection

in the peacetime draft but are not now a significant cause of rejection because of lowered standards. The defects were classified as missing teeth, 36 per cent; needing dentures or having dentures, 20 per cent; caries, 24 per cent; and malocclusion and other dental defects, 20 per cent.

Eye defects, in third place, were classified as refractive errors, 25 per cent; partial blindness and blindness, 23 per cent; strabismus and various other defects of the eyes, 52 per cent.

In the musculoskeletal group, there are a great variety of conditions, either congenital or the result of accident, which are not concentrated in any particular classification. After-effects of poliomyelitis are not included here but are placed in the neurological group.

About 57 per cent of skin defects were diagnosed as acne and 13 per cent as fungus infections. Pyorrhea accounted for 60 per cent of the defects of mouth and gums and gingivitis 17 per cent. Arterial hypertension made up 20 per cent of cardiovascular defects. Deviated septum accounted for 50 per cent of nose defects. Hypertrophy of tonsils and tonsillitis made up 88 per cent of the throat defects.

Varicocele accounted for 50 per cent of defects of the genitalia.

Rejection rates during the period November 1940, through

Table 1. Principal defects in rejected men (4).

	REJECTION RATE PER 1,000 MEN EXAMINED	
	White	Negro
<i>A. Rate Greater Among Whites</i>		
Eyes	31.5	27.0
Ears	22.4	4.0
Teeth	8.8	4.5
Tuberculosis	15.2	11.1
Hernia	31.6	26.9
Mental Disease	52.4	32.4
Neurological	23.1	14.6
Musculoskeletal	37.4	32.4
Endocrine	5.9	1.8
Weight and Others	9.5	6.6
<i>B. Rate Greater Among Negroes</i>		
Cardiovascular	33.8	42.5
Genitalia	4.3	13.1
Syphilis	14.9	170.5
Other Venereal Diseases	1.2	18.2
Mental Deficiency	10.7	19.0
Educational	19.0	99.8
Feet	4.1	6.9

September 1941, increased with age, varying from 41.6 per cent for men born in 1919 to 86.5 per cent for men born in 1904.

Rejection rates for all causes have been somewhat higher for Negroes than whites. For example, in the period between April 1942, and March 1943, rejections per 100 men examined at local boards and induction stations were 36.9 for whites and 56.0 for Negroes (4). The data (Table 1) indicate a rate higher among whites than Negroes for the following defects: eyes, ears, teeth, tuberculosis, hernia, mental disease, neurological defects, musculo-skeletal, endocrine, weight and others. The rejection rate is higher among Negroes for the following defects: cardiovascular, genitalia, syphilis, other venereal diseases, mental deficiency, educational, feet.

In the case of tuberculosis, disagreement exists between various published series of data as to the relative rate in whites and Negroes. In an earlier publication (3) of the Selective Service System, rejection rates at local boards were 7.3 per 1,000 whites examined at local boards and 3.6 per 1,000 Negroes. Rowntree (5) reported a rejection rate for men 18-19 years of age of 6.6 per 1,000 whites examined and 9.7 per 1,000 Negroes. Karpinos (6) for young men between 18 and 38 years found a rate of positive cases of tuberculosis of 12 per 1,000 for whites and 15 per 1,000 for Negroes. Adjusted for males 18-39, 1940 United States Census, the rates become 19 per 1,000 for whites and 20 per 1,000 for Negroes. The results are summarized in Table 2.

Table 2. Comparison of rejection rates because of tuberculosis for white and negro registrants.

SERIES	REJECTIONS PER 1,000 MEN EXAMINED		
	White and Negro	White	Negro
Selective Service (3)	6.9	7.3	3.6
Selective Service (4)	14.6	15.2	11.1
Rowntree (5)	6.8	6.6	9.7
Karpinos (6)	12.0	12.0	15.0

The data appear to indicate that the prevalence of tuberculosis among living Negroes is not far different from that among whites. In view of the higher mortality among Negroes, this would seem to mean a shorter duration in Negro cases prior to death than in whites or lower case fatality, or a combination of the two. These factors are obviously partly related and partly independent of each other in their effect on the prevalence in the population of living persons having the disease.

Rowntree gives rejection rates by broad occupational groups (Table 3) which show highest rejection rates among farmers and emergency and unemployed workers and lowest rates among professional, supervisory, craftsmen, clerical and kindred workers.

Dr. Ciocco (7) and other workers in the Public Health Service have used the data which we have collected at Hagerstown over the past twenty years to make a comparison between the physical status of selectees today and the physical status of those same youths when they were children some fifteen years ago. The findings of that

Table 3. Rejection rates, by broad occupational group, of 18 and 19 year old registrants.

OCCUPATION GROUP	RATE PER HUNDRED EXAMINED		
	White and Negro	White ¹	Negro
All Occupations	25.4	23.8	45.5
Professional and Semiprofessional Workers	20.5	20.5	*
Farmers	41.1	36.4	58.0
Proprietors, Clerical, Sales and Kindred Workers	21.0	20.9	26.9
Craftsmen, Foremen and Kindred Workers	20.4	19.9	39.6
Operatives and Kindred Workers	22.2	21.6	39.6
Service Workers	28.9	25.8	35.9
Laborers Except Farm and Mine	28.2	25.3	46.0
Emergency Workers and Unemployed	37.7	37.2	44.9
Students	23.3	23.0	31.6

¹ Includes all races other than Negro.

* Insufficient data for calculation of rate.

study indicate that many of the physical defects responsible for the rejection of men by Selective Service today were evident in their incipency when these young men were children. A relatively large number of the selectees who have been rejected for defective teeth and vision, for example, already gave evidence of these same defects when they were in elementary school. Many cardiovascular and hearing defects responsible for rejection could also have been detected in childhood. Furthermore, the interesting fact was shown that underweight and poor nutritional status and bad posture were much more frequent among children rejected for military service fifteen years later than among children who were later accepted for military service.

For example, the number of decayed, missing or filled teeth per 100 children was twice as high among those children later rejected by draft board physicians as among those placed in Class 1-A. Low visual acuity at school examinations fifteen years ago was found in 49 per cent of the selectees who were later disqualified because of vision as compared with only 5 per cent among the men placed in Class 1-A.

The rejection rate for young men who had been found to have poor nutrition or posture during childhood was 50 per cent higher than among young men who had good nutrition and posture as children.

Underweight children fifteen years ago grew up to be young men of whom 60 per cent failed to meet Selective Service standards as compared with 45 per cent rejections among those whose weight had been normal during childhood.

The immediate reaction, based on the exigencies of the moment, has been to consider the rehabilitation of men found defective. However, it would seem that it is appropriate to inquire into the possibility of preventing the conditions which lead to disqualification of men as soldiers. Military health requirements spring from the need for men who can function efficiently under arduous cir-

cumstances, and perhaps for civilian life such requirements may seem stringent and unnecessary. But it would appear beneficial to adjust our standards of civilian good health so that such requirements at least will be met more frequently in the future than they are now.

The need for competent, healthy, physically-fit young men and women is now and is going to be for years to come at an all-time high, so that the Hagerstown data would seem to be of more than academic interest since they show that we have had for years an effective way of predicting long in advance the physical status of adults of the new particularly important productive ages.

Since the time of the Civil War, the high proportion of physical defects found among young men being examined for military service has been viewed with alarm. The only result observable in eighty years, however, has been a number of papers by medical statisticians. It is to be hoped that the present results may draw the attention of others than statisticians and serve to promote the planning of more adequate health services for children and adolescents so that young men and women of future generations may achieve a maximum level of good health.

REFERENCES

1. Congressional Record, March 3, 1944, 90, No. 41, p. 2218.
2. Perrott, G. St. J. and Britten, R. H.: Summary of Physical Findings on Men Drafted in the World War. *Public Health Reports*, January 10, 1941, 56, No. 2, pp. 41-62, Reprint No. 2223.
3. Medical Statistics Bulletin No. 2., National Headquarters, Selective Service System, Washington, D. C., August 1, 1943. (Data for the period November 1940 through September 1941).
4. Principal Defects of Inducted and Rejected Registrants, April 1942-March 1943, Selective Service System, Washington, D. C.
5. Rowntree, Col. Leonard G.; McGill, K. H.; and Edwards, T. I.: Causes of Rejection and the Incidence of Defects Among 18 and 19 Year Old Selective Service Registrants. *Journal of the American Medical Association*, September 25, 1943, 123, No. 4, pp. 181-185.
6. Karpinos, Bernard D.: Prevalence of Pulmonary Tuberculosis Among Selectees. *Human Biology* (to be published).
7. Ciocco, A.; Klein, H.; and Palmer, C. E.: Child Health and the Selective Service Physical Standards. *Public Health Reports*, December 12, 1941, 56, No. 50, pp. 2365-2375, Reprint No. 2338.