

6. Analysis of Results

The Japan Sports Agency has been working to promote the improvement of community sports, physical education, international competitiveness, and etc. since its inception. One of its major pillars has been measures that ensure sports opportunities that facilitate the promotion of health.

To realize the concept of the "life-long sport society" put forward in the Sports Basic Plan, this fiscal year the Japan Sports Agency has decided to analyze the amount of exercise and sports being done (referred to collectively as "exercise" below) and the relationship with physical fitness and health.

I. Comparisons with Past Surveys in Terms of Exercise by Age

Survey on Physical Fitness and Motor abilities covers persons between the ages of 6 and 79 in terms of doing exercise and sports. The FY2015 survey has been analyzed in comparison with the FY1985 survey (30 years ago) and the FY2000 survey (15 years ago).

Figure 5-1-1 shows the FY2015 results for the percentage of participants by age in terms of doing sports or exercise at least once per week.

The percentage of both males and females who exercise/do sports ("exercisers") at least once per week is relatively high during elementary school, but drops starting in the late teenage years and rises again in old age.

For males, the percentage of exercisers peaks in the second year of junior high school (13 years old) at 96.1%, which then drops throughout high school onwards to reach a low in the late 40s (45.9%), then begins to rise again in the late 50s.

For females, the percentage of exercisers peaks earlier, in the fifth grade of elementary school (10 years old), but stays at 83.6% until junior high school, when it drops to about 80%, then drops sharply during high school to a low of 33.7% at age of 18. Numbers begin to rise in the late 20s, with the percentage of females exercising at least once per week surpassing the same percentage of males from the early 50s.

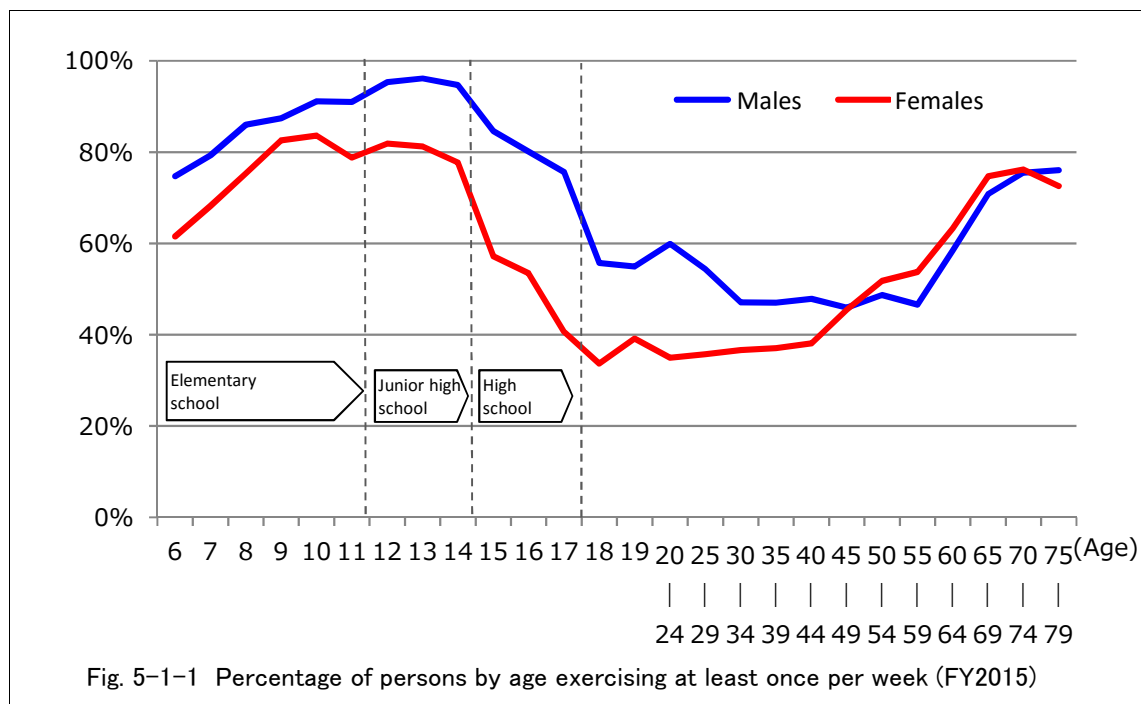
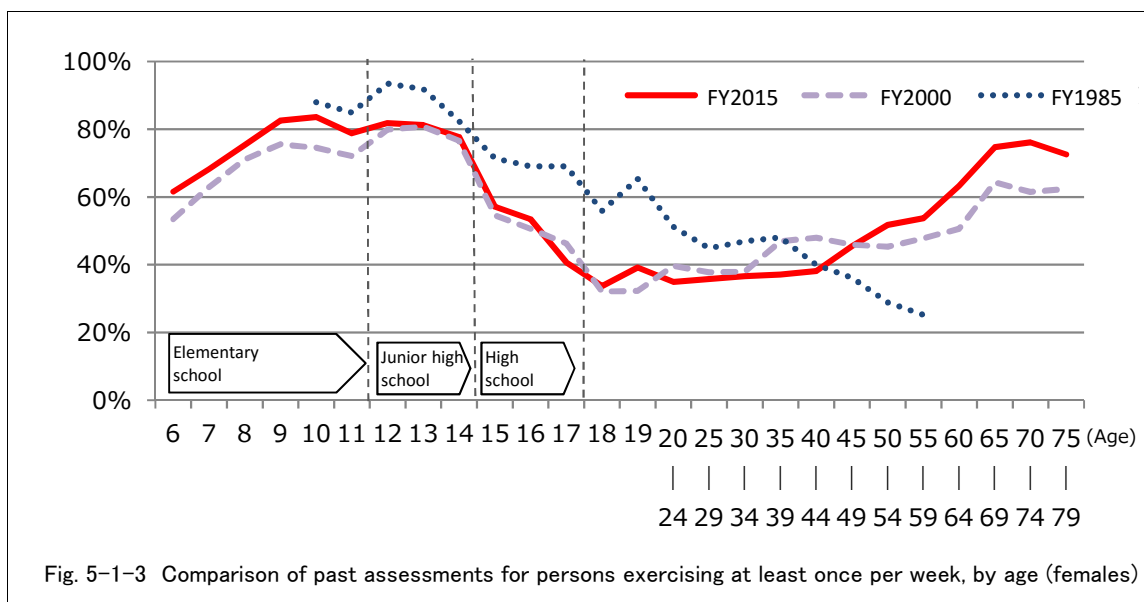
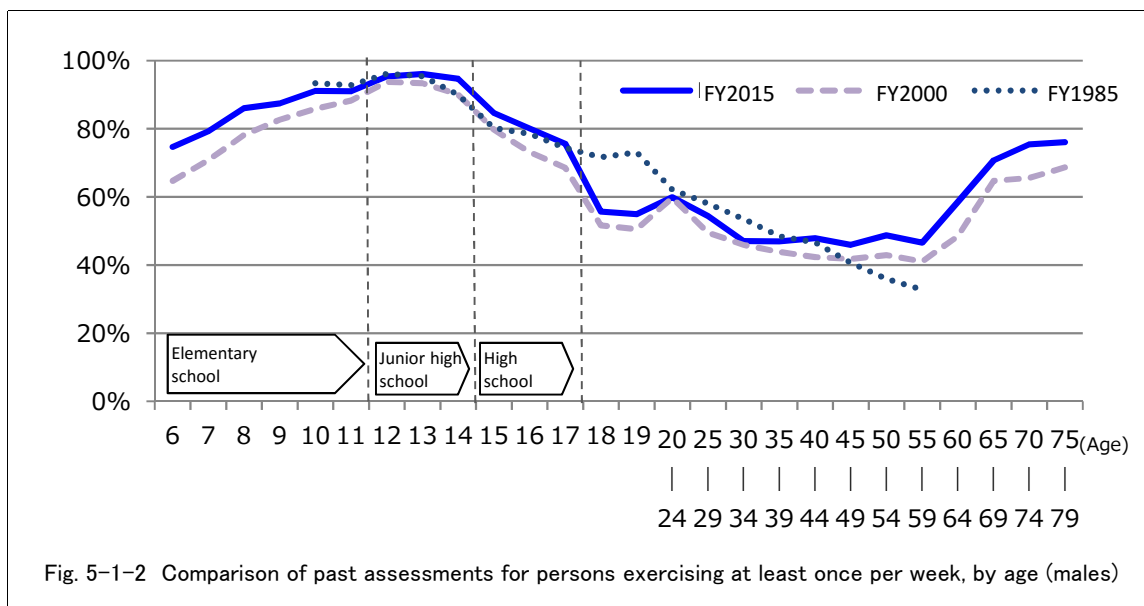


Figure 5-1-2 and 5-1-3 compare shifts in the FY2015 results with those of the FY2000 and FY1985 results.

The FY2015 results are generally above those of FY2000 for males of all ages. Conversely, the FY2015 results for females from the early 20s to late 40s are lower than those for FY2000. The graph lines reverse from the 50s onward, with the FY2015 females over 70 opening up a 10-15 point gap.

If we further compare the FY2015 results to the FY1985 results, the FY2015 results for both males and females from high school graduation to about the late 40s are lower than their FY1985 counterparts. Especially notable are females in their late teens through their 30s, for which the FY2015 results are 10-20 points lower. On the other hand, the results for women in their late 40s onward exceed their FY2000 counterparts, with the difference growing larger with age.

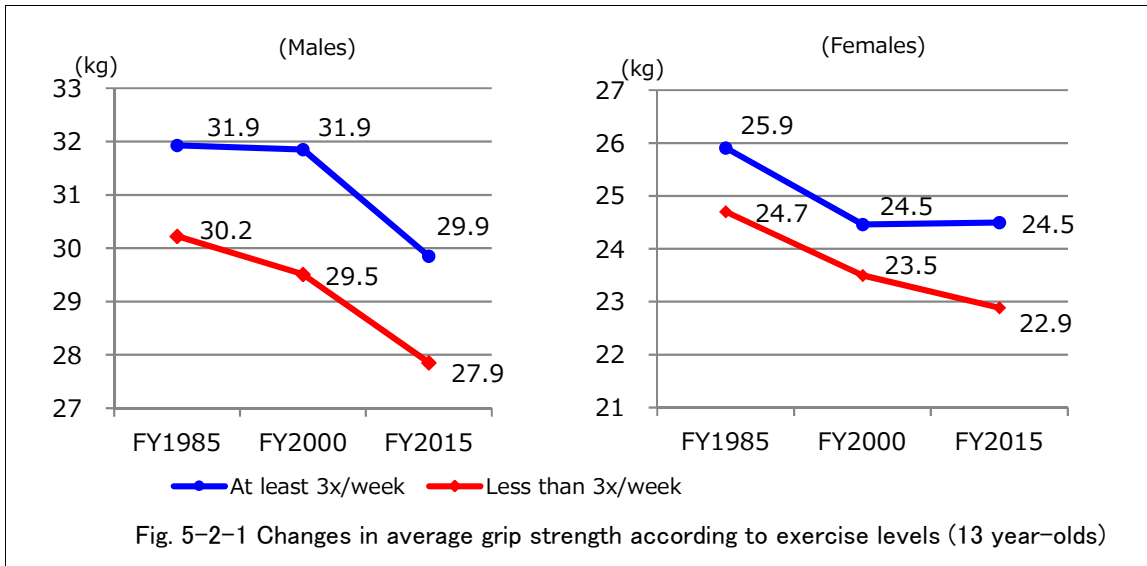


There are no significant changes in FY2015 for males compared to FY1985, but for females in their late teens and 20s, there has been a large decrease in exercise. As such, it can be said that measures to encourage continued exercising as a lifelong habit that include youth are important.

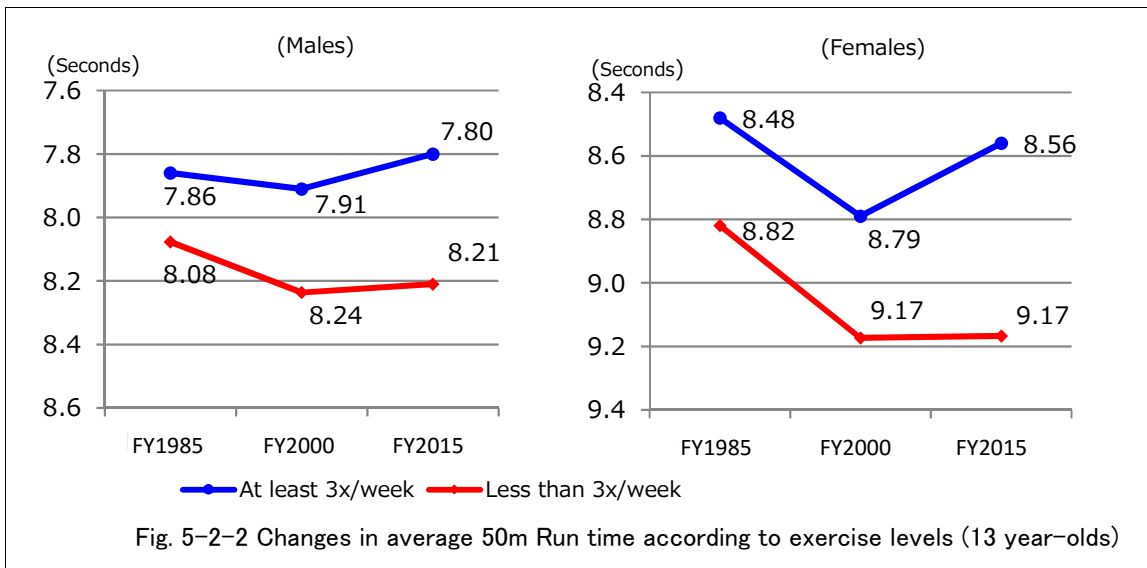
II. The Relationship between Exercise Levels and Physical Fitness and Motor abilities in Youth

Looking at the 18 years following the start of New Physical Fitness Test in terms of change over time in the total scores, the FY2015 results show a slight upward trend for almost all ages (refer to figures 2-19, 2-20). However, the figures remain lower than the high levels of physical fitness seen in FY1985.

A comparison of changes in grip strength for FY1985 and FY2000 (13-year-old males and females) was made with levels of exercise (Fig. 5-2-1). There was an overall downward from FY1985 through FY2000 and FY2015, but the groups that exercised less than three times per week (both males and females) show a wider decline over their FY1985 counterparts than the groups that exercised at least three times per week.



A similar comparison of changes for 13 year-olds for 50 dash (Fig. 5-2-2) shows slower times in FY2000 compared with FY1985, but times became faster again in FY2015. When looked at in terms of times exercise per week, times, the times for those who exercised at least three times per week in FY2015 improved over FY2000, but the times for those who exercised less than three times per week essentially remained flat.



Although 2015 physical fitness and motor abilities remain lower than levels around 1985, when comparing children's levels of exercise, the levels of children who do not exercise much have fallen further than children who exercise a lot. It can therefore be said that measures that address children who are not really getting enough exercise are important.

III. The Relationship between Exercise Levels and Physical Fitness/Motor Abilities in Adults and Seniors

(1) The relationship between BMI and exercise in the present and past (adults)

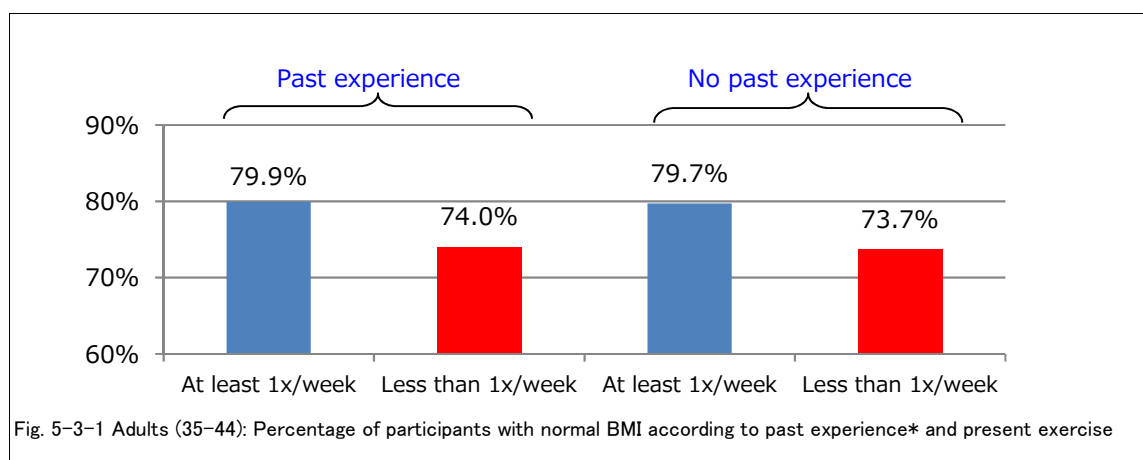
Given the comparatively low amounts of exercise done by adults in their 30s and 40s, comparison was made between the frequency of exercise and BMI (Fig. 5-3-1). Here, the comparison used was based on whether or not the assessed person had participated in a sports-focused club in high school to indicate past exercise. From the perspective of picking up on metabolic syndrome risk, BMI was used because it is a standard measurement for specific medical checkups and specific medical guidance.

Note 1: Metabolic syndrome refers to visceral obesity couple with hypertension, high blood sugar and lipid metabolism abnormalities that can lead to atherosclerotic diseases such as heart disease and stroke.

Note 2: Specific medical checkups and specific medical guidance: Specific medical checkups began in April 2008 to focus on metabolic syndrome. Specific health guidance support is provided to persons whose checkup results show a high risk for developing lifestyle diseases but for whom there is good chance that amending lifestyle habits will provide preventive effects.

Note 3: BMI (Body Mass Index) is an internationally accepted measure of obesity levels. BMI is obtained by dividing weight (in kg) by height (in cm), then dividing by height again. Japan Society for the Study of Obesity standards state that a BMI between 18.5 and 25 is considered a normal BMI in Japan.

The percentage of those with a normal BMI who had been in a sports team/club in high school (“past experience”) and who now exercise at least once per week is 79.9%, which is 6 percentage points higher than those who now exercise less than once a week. The percentage of those with a normal BMI who did not participate in a sports team/club in high school (“no experience”) yet who now do so at least once a week was 6 percentage points higher than those who do so less than once a week, showing no large difference with persons who have past experience.

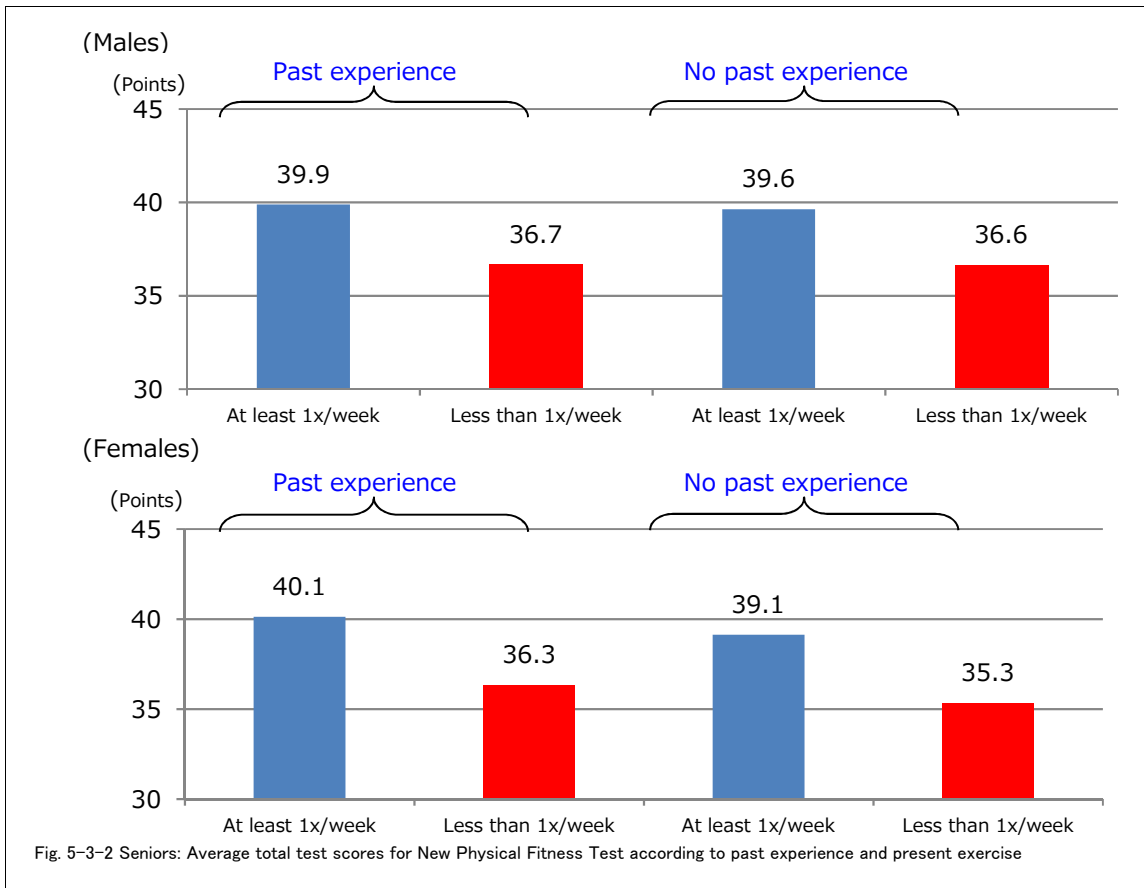


* Past experience: In terms of activity in a school sports team/club (junior high school-university), all those who did not specifically respond “no past experience” are counted as having “no past experience.” The others except those with “no past experience” are counted as having “past experience.”

(2) The relationship between past and present exercise and physical fitness/motor abilities against ADL test results (seniors)

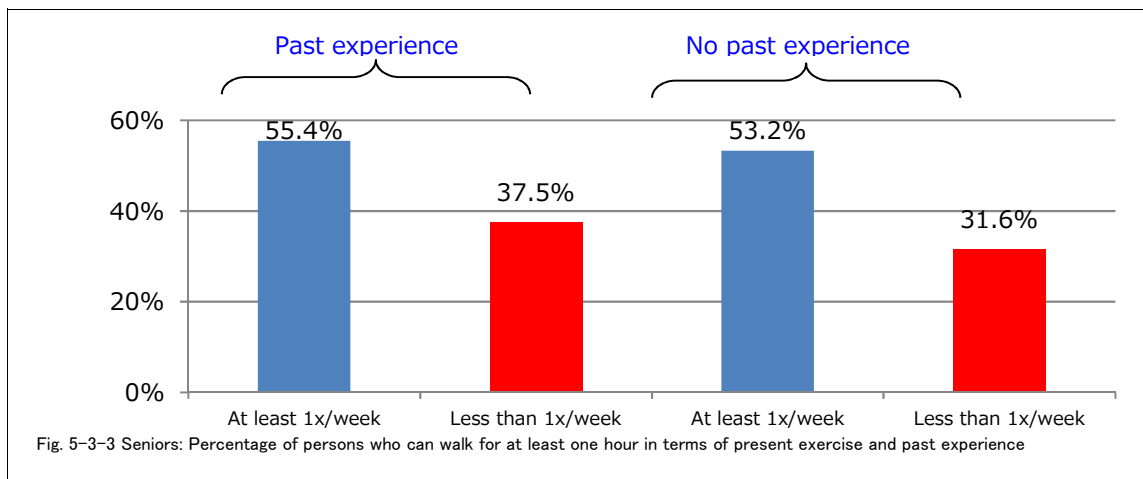
An analysis was carried out for past experience and current physical fitness/motor abilities against ADL test results (Fig. 5-3-2)

The average total test score for New Physical Fitness Test in terms of past experience shows that both males and females who are exercising at least once per week averaged 3 to 4 points higher than those who exercise less than once per week (males: 39.9, females: 40.1). For those without past experience who exercise more than once a week, results similarly showed an average score 3 to 4 points higher than those who exercise/do sports less than once per week (males: 39.6, females: 39.1), indicating no large difference in results between past experience and no experience.



An analysis of the relationship between the ADL test “Can you walk for one hour?” and past/present exercise was carried out (Fig. 5-3-3), given the importance of preventing locomotive syndrome and independent living.

The percentage of seniors who can walk for more than an hour who have past experience and now exercise at least once per week is 55.4%, while the figure for those who exercise less than once per week is 37.5%, a 17.9 percentage point difference. Even for those with no past experience, the score of those who exercise at least once per week exceeded the score of those who exercise less than once per week by 21.6 percentage points to reach 53.2%, indicating no large difference among currently active seniors in terms whether they had past experience or not.



Note 1: Locomotive syndrome is a disabilities of the motor organs that reduces the level of independence and puts an affected individual at high risk of requiring nursing care.

Note 2: The Activities of Daily Living (ADL) test evaluates whether or not the basic movements necessary for daily life can be successfully carried out. The assessment is done using a Yes-No assessment sheet and was used for seniors participating in the FY2015 Survey on Physical Fitness and Motor Abilities.

Continuation of exercise habits throughout one's life is important, but it can be said that doing exercise now has a positive effect on physical fitness and health even for people with no past experience of doing so.