The Comparison of the Real Age and Body Age of Management Level Employees

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Abstract: The extension of healthy life expectancy is of high concern these days. Keeping some functions above a certain level is necessary for body activities, like muscclar skeleton system, respirator circulation system and nervous system. Although function aging may be unavoidable, through analyzing their quantity, body age can be inferred, furthermore getting body age younger through specific functional exercise may become possible. One kind of total body scoring technology is used to calculate the body age of 42 managers and executives of one corporate, and 16 body items are measured. It is based on research about relationships of 430 body items collected from three-dimensional body scan, CT and blood analysis etc. The result shows average body age 39 versus real age 52. However, they are almost same for various people in public society. So, it is speculated that employees promoted above management level are better at self-management about health.

Keywords: Body Age, Body Composition, Body Size, Body Activity, Athletic Ability

1. Introduction

Nowadays, the extension of healthy life expectancy is of high concern. To spend a high quality of life even getting old, it is necessary to keep some functions above a certain level for body activities. And it is of considerable importance to assess body age, aside from real age.

In this research, the body ages of management level employees of one corporate are calculated, using one body age assessment technology. Then they are analyzed and compared with the result gotten from ordinary people in public society. Here, we will report the feature of management level employees extracted from the analysis.

2. Body age assessment technology — Body Score

Body Score technology is a calculation model based on the data resource processed by “HealthGrid, inc.”, which composed by 430 body items collected from three-dimensional body scan, CT and blood analysis etc. The relationships of those 430 body items are analyzed, then 16 physical items that are of high relevance with others and easily to be measured are extracted to derive individuals’ total health conditions. Body Score uses evidence-based approaches and its algorithm enables users to accurately assess health conditions with limited checkup items. Body age is also inferred from whole body score items compared with the average level of people of the same age.

The 16 items are as follows: BMI, body fate percentage, basal metabolism; circumference of chest, abdominal, hip and middle thigh; body temperature, high blood pressure, low blood pressure and heart rate; reaction time, grip strength, standing with eyes closed, chair stand-up exercise and sit-up exercise.

Besides, items used on Body Score are devised into 4 categories, including body composition, body size, body activity, athletic ability. A whole picture of individual’s health condition can be understood by the score calculation from the perspectives of item, category and the whole body. Figure1 is an example of Body Score sheet.

Figure 1. Example of Body Score sheet

3. Measurement and calculation of body age

During 3 days of July 2016, 42 management level employees of one corporate were measured as subjects in a meeting room about 20 m² of the corporate. Five staff measured the 16 items of Body Score of everybody in a decided order using necessary tools.

Firstly, blood pressure and heart rate are measured, for it is
easily influenced by environment, even light exercise. Then, BMI, body fat percentage and basal metabolism are measured by body composition meter in condition of barefoot. Measure was used to get body size including the circumference of chest, abdominal, hip and middle thigh. Temperature was measured by infrared type thermometer. Finally, athletic ability was measured including reaction time, grip strength, standing with eyes closed, chair stand-up exercise and sit-up exercise.

After the end of measurement, data were inputted into the application of Body Score developed by “HealthGrid, inc.” and one personal Body Score sheet like Figure1 was outputted with the body age and the score and comment of every category and every item.

4. The analysis of the measurement result
1) Looking overall at the scatter plot of real age and body age in Figure2, the whole trend of subjects’ body age is better than real ages. Only one person got a lower body age compared with real age.

![Figure2. Scatter plot of real age and body age of subjects](image)

2) As is showed in Figure3, the average real age of subjects is 52 years old, while their average body age is 39 years old, with a difference of 13 years old, which is fairly good. The result also shows that their blood pressure, reaction time and stand-up exercise are better than people at the same age.

![Figure3. Image of average measurement results of subjects](image)

3) From the age distribution of subjects respectively defined by real age and body age showed in Figure4, it can be found 96% subjects are 45–59 years old. Subjects at the real age of 50–54 years old cover the maximum ratio in 41%, while subjects at the body age of 40–44 years old hold the largest distribution in 31%.

![Figure4. The distribution of real age and body age by age group](image)

5. Summary
The result of body age measurement for management level employees through Body Score technology shows average body age 39 versus real age 52. Almost people have younger body age than real age. However, for various people measured in public society, the average body age and real age are almost the same. So, it is speculated that employees promoted above management level are in better health condition and are better at self-management about health.

As is analyzed in this research, through visualization of body age different from real age, the level of body function of individual can be inferred and the feature of a group of can also be understood.

Furthermore, body function of individual and group can also be evaluated by category, which makes possible that through targeted and individualized specific functional exercise, one’s body function level can be improved to some extent. Accordingly, evaluating by body age, aside from real age, makes the dream of renewing youth to be possible.

Reference