

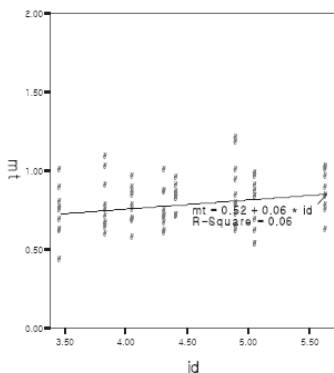
K. Jung, B. Song, H. Shin, K. Chun, B. Own. Comparative study between old and young people's basic characteristics for interface design. *Gerontechnology* 2008; 7(2):135. The interface is one of the most important components in a product. In particular, it plays an important role in product safety and usability as an interactive part between old user and product. Old people experience difficulties in controlling some interfaces because of problems of size, shape, direction of movement, etc. So, it is necessary to study old people's characteristics for operating interfaces or control devices and to consider the characteristics in design. In this aspect, two topics for control device design were studied: (i) old people's characteristics in controlling a push-type button, and (ii) control-movement relationships. **Methods** In the first study, we identified some population stereotypes for old people in comparison with young people. Experimental models for controls of commercial products were made to effectively perform the experiment. One hundred old persons and one hundred young persons participated in this experiment. In the second study, we performed an experiment to identify old people's characteristics for controlling some button-type controls in comparison with young people. The experiment is related with old people's movement time for controlling push-buttons, which is one of the most popular controls in computerized products such as cellular phones, remote controllers, etc. In case of old people, it is important to identify the effects of button size and moving distance for movement time to design a product. In this aspect, the effect of the index of difficulty (ID) for movement time that is calculated by moving distance and button size was identified for old people in comparison with young people. Ten old persons and ten young persons carried out this experiment. Some experimental devices were made for this experiment. **Results and discussion** As the result of the first topic, old people's population stereotype on control movement was not remarkably different in comparison with young people. However, old people's stereotypical relationships were dominantly weaker than the young in most cases. As the result of the second topic, the movement time that a subject takes to control the button was significantly influenced by the index of difficulty (ID) and showed a significant difference between old people and young people. Also, a significant interaction effect between ID and age was identified for the movement time. Figure 1 shows graphs plotting movement time with ID in both cases of old and young people. As you can see in figure 1, movement times were effectively fitted in Fitt's equation. So, it was validated that movement time could be estimated by Fitt's equation in case of both old and young people.

References

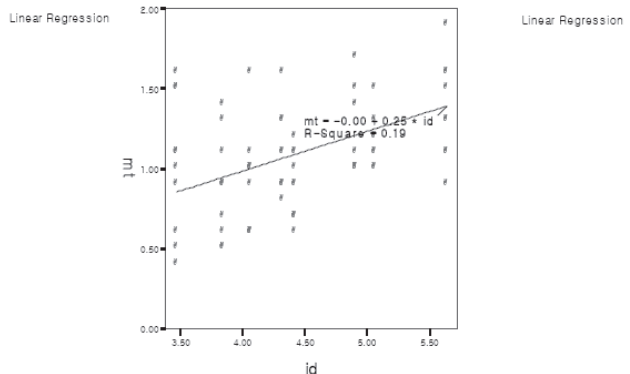
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a Old people



b Young people

Figure 1 Control performance