

Development of quantitative evaluation tool for psychological changes

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1. BACK GROUND

It's difficult to measure the psychological amount of the person easily. However, should be useful for a variety of way if it becomes possible. When you can know the psychological amount of the child easily, effective disposal and treatment according to child's heart are possible. However, under the present conditions, the action of the child by the nurse and the observation of the behavior are often found . We proved that we could replace psychology evaluation term with physical amount from a Previous study. Because I replaced the psychology amount of the person with physical amount and could evaluate it, I started the development of the tool.

2. PURPOSE

It aims to develop the tool which can replace the psychological amount of change of the child with the physical amount of change.

3. PROCES

This tool is a ball and cube of the equivalence volume and center of gravity position that incorporated seven kinds of the different weights inside.

- 1) With two kinds of wooden balls of diameter 72 mm (Hereinafter referred to as a tool for adults) and 62 mm (Hereinafter referred to as a tool for child). About one that became the same volume as this produced each seven cubes of 58 mm (Hereinafter referred to as a

tool for adults) and 50 mm (Hereinafter referred to as a tool for child). This was produced based on the size in which it applied to Regulation ball for adults and D type for boy of the baseball ball.

- 2) In experiment 1.2, the magnitude estimation was used and evaluated.
- 3) I performed a follow-up survey to from a second grader to a ninth grader for one week to inspect age and the time of testee who became effective.

4. EXPERIMENT INTENDED FOR CHILD

The tracking experiment was done for six days for four testees. The tool for adults tool was too big in the hand of the child and it was hard to grasp it and disturbed the evaluation. Because a testee could not concentrate on an evaluation and had begun to treat it as a plaything, I canceled an experiment. The evaluation to weight appeared as follows when having experimented with the tool for child. All testees chose a light tool of 150g from 50g in the final day though there were a lot of tendencies to choose 200g and 250g during the sixth day from first day. When the reason to have chosen a light tool after the experiment ended was asked to the testee, the opinion "It was lonely that everyone separated" and "I do not want to return to the house" was obtained. The change in the amount of psychology appeared remarkably when feeling that the experiment ended. A heavy tool is chosen when a person feels fun, we got a result to which the psychological amount and the weight are proportional from this thing..

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5. EXPERIMENT INTENDED FOR ADULTS

Even the adult verifies whether the same tendency as the child appears. Therefore, it experimented for 40 university students (36 valid response number people).

6. CONFIRMATION EXPERIMENT BY THE AGE DIFFERENCE

We made an experiment using the magnitude estimation targeted for 11 children to make sure whether the difference in the experimental results which form between the child and the adult was anything to choose as the age difference of testee. In addition, the experimented time was divided into two times from ten o'clock and 15 o'clock in consideration of the influence that time zone gave to the sensibility evaluation. As a result, I distributed it greatly and was able to classify it in three following groups.

- 1) 7years to 10 years without worrying about the surroundings were evaluated based on *KANSEI*.
- 2) The sensibility evaluation was able to be done though 10-14-year-old testee worried about friend's opinion and result.
- 3) The evaluation based on logic intervened a lot, and it became a difficult to say result with the sensibility evaluation when becoming an age any more. Testees weren't cooperative more than an experiment at ten o'clock by the experiment performed in the afternoon.

7. THE EVALUATION OF AN EXPERIMENT RESULT AND THE TOOL

I inspected target age (7 years old - 14 years old) of this tool and the effectiveness of the experiment suitable time, and a constant tendency was provided. The tendency to become a feature is four of the following.

- ①It tries to arrange it in not the evaluation of the tool unit by going up of the age but order of weight.
- ②Even if it was the same weight , volume, testee felt that a globe was bigger heavily.

③Regardless of age, testee was restless by the experiment to perform in the afternoon. (testee tries to bring an experiment to an end early, and. the different play using the tool is begun.)

④It was felt that the ball with wide area that touched the hand even if it was the same weight was heavier. The cube was suitable for expressing the anxiety on the contrary. Ball is heavy from the impression after the experiment, but is stable, It was difficult to catch at a cube and an unstable opinion was heard much.

8. CONSIDERATION

Within the range of the actual experiment, it was thought that the change in the amount of psychology was able to be quantified according to the amount of the change of a physical element of the object. However, the tendency that started going up the age of the testee and arranging the numerical value in the progression appeared strongly. The correspondence age of the testee thought 14 years old as the effective area from the result for which it's difficult to become the value of the tool individual. In addition, I feel the influence that the object shape gives to person's psychology large like the thing with a lot of areas that touch the hand and heavy. It became the result of feeling insecurity compared with the thing not gripped easily.

9. FUTURE DEVELOPMENT

This tool would like to support effective medical nursing which matches a heart with grasping the psychological change amount of the child. Therefore, actually, it's expected to make an experiment targeted for the hospitalized child. Moreover, the feedback is obtained and the improvement and the development of the tool are scheduled.

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