Lea Hyvärinen
LKT Lea Hyvärinen
Silmätautien erikoislääkäri
Eteläesplanadi 12
00130 H:KI 13 · Puh. 636 363
Mrs. Polly K. Edman

August 31, 1977

The testing of the new test might be quite demanding and in that work I hope to get help from the Institute of Psychology here in Helsinki. Docent Veijo Virsu is a good friend of mine and he is very much interested in the different problems of measuring visual acuity. At the moment he is abroad so I cannot consult him now. He will be back on September 10 and after that I will discuss problems with him and let you know his points on the problems.

There is one additional vision test you might be interested in. That is the Stycar Vision Test which is distributed by the National Foundation for Educational Research in England and Wales, 79 Winnpole Street, LONDON W.1. It requires readiness of knowing "similar-different", because it uses letters and child is asked to find out whether she has a similar figure as the test one. Older children, of course, can name the letters. Our new test can be used the same way. In most cases, however, I have found that small children and those who are mentally handicapped have it easier to just name the object than to compare differences and similarities.

I have arrived this far on my work, I am not finished yet with the pictures for the draging book. I try to get my ideas on paper before September 10, so I can send you the second letter after the meeting with Veijo Virsu.

Thank you very much for telling about Torben Grønning and Patricia Sohl. I hope that I will see them during my next visit to Denmark which may occur during next spring or summer.

As soon as you will have your book ready, I would be very happy to buy it for both the Low Vision Clinic and for my own children.

I will write to you in two more weeks.

With best regards

Lea Hyvärinen, M.D.

ENCL.

RETINAL VASCULAR CENTER

Arnall Patz, M.D. (301) 955-3426
Stuart L. Fine, M.D. (301) 955-3648
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WILMER OPHTHALMOLOGICAL INSTITUTE

THE JOHNS HOPKINS HOSPITAL

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600 NORTH WOLFE STREET
BALTIMORE, MARYLAND 21205
Appointments: (301) 955-3518

July 30, 1979

Dr. Lea Hyvarinen
Etelaesplanadi 12
00130 Helsinki 13
Finland

Dear Dr. Hyvarinen:

Dr. Patz is out of the city lecturing but before he left he asked that I send you a copy of the letter from Dr. David L. Guyton regarding your "New Visual Acuity Test for the Pre-School Children."

He asked that I convey his best personal regards to you from him and from all of us here.

Sincerely,

Sara Podell

Mrs. Sara Podell, sec'y to

ARNALL PATZ, M. D.

Enclosure:
Letter from Dr. Guyton

THE JOHNS HOPKINS UNIVERSITY
SCHOOL OF MEDICINE

DAVID L. GUYTON, M.D.
Assistant Professor

THE WILMER OPHTHALMOLOGICAL INSTITUTE
THE JOHNS HOPKINS HOSPITAL
BALTIMORE, MARYLAND 21205
TEL: (301) 955-8314

July 25, 1979

Arnall Patz, M.D.
Director, The Wilmer Institute

RE: Lea Hyvarinen's visual acuity test

Dear Arnall:

Thank you for asking for my comments regarding the visual acuity test for pre-school children devised by Dr. Hyvarinen.

The test appears to be a good one, following many of the recognized best rules for constructing such tests. For instance, the spaces between the lines and between the letters become geometrically smaller as the finer levels of visual acuity are displayed. The fact that the four characters used have roughly similar shapes probably does make them equally discernable.

We do find that young children are able to identify familiar objects approximately 1 year earlier than they can play the E game. I wonder, though, whether such young children can correctly identify the circle and square shapes as such, for these are abstract objects usually not learned until later ages.

It is interesting that the line width: figure width ratio is not 1:5, as in the classical Snellen test figures. However, there is no particular reason why this needs to be so, and indeed if the chart correlates with our other standard methods of testing visual acuity, as stated on the cover letter, the test should indeed be useful.

I asked the orthoptists what they thought of this test, and they felt that small children may not have problems identifying the circle and square, particularly if they were given a card with the four different shapes on it such that they could match the shape that was pointed out at the end of the room to the shape on the card.

These are just some random thoughts, I hope they are of some help if you are asked to comment further on this chart.

With best regards.

Sincerely,

David L. Guyton, M.D.

DLG/lm

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July 23, 1979

Dr. David L. Guyton
Wilmer Bl - 35

Dear Dave:

Lea Hyvarinen, who was formerly a Fellow in fluorescein angiography here, has devised this test while she is in Helsinki. I would appreciate your appraisal of the material in case I am asked to make any further comments to her or the manufacturer about it.

Many thanks and best personal regards.

Arnall Patz, M. D.

AP:sp

From the desk of -
POLLY EDMAN

Sunday afternoon
October 9, 1977

Dear Lea,

It is my understanding, from the latest telephone conversation, that the distance between forms in each row should be the same as the size of the forms in that particular row. This means that you have many more forms per row than Lighthouse.

Hope that this is what you had in mind. It took 34 hours of work as I had to re-draw all the forms and add many more to allow for the new spacing.

Good luck with your testing..it will be interesting to hear how it all works out.

I realize that the thickness of the forms may vary but it is frantically difficult to make them exact. Actually in the end product* these forms are deminished photographs of the larger size and that way every form is uniform in size. A thing that can only be done if you have a large reproduction projector at your disposal..which I do not .. unless you want to pay a large price for this experiment.

Love,

Polly

* WHEN COMMERCIALLY PRODUCED

LKT Lea Hyvärinen
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September 30, 1977

Mrs. Polly K. Edman
Robertsviksvägen 2

S-182 35 DANDERYD SWEDEN

Dear Polly,

As I told you on phone, the visual acuity test for children can be evaluated in the Institute for Psychology in case the test prototype is ready before Thursday 13th of October. Docent Veijo Virsu, who is a good fried of mine, has succeeded in arranging it so that the visual acuity test can be included in the laboratory material and analysed among other tests. The students study problems in measuring different parameters of vision, so it fits our purpose unusually well. The work would be extremely well done, quickly and at no cost, so if only possible, try to get the pictures, please. And if it is impossible, call me and I try to arrange things some other way. The reason why I want to have things done now, is the fact, that Veijo Virsu will be learning for almost a year during which time there is no possibility for as high quality work.

We have analyzed the test symbols and came to following conclusion:

1 The symbols should be 4: house, square, apple and circle. 4 symbols instead of of 3 makes quessing less probable.

2 Distance for testing is 10 feet or 3 meters, thus only one half of the distance of Lighthouse test. Small children will not fixate at distances of more than 3 - 4 meters. When the distance is decreased to one half, the size of symbols is also decreased to one half, and we get a slightly smaller test, also a good feature. We also can have already 3 or 4 symbols on the upper most row. Usually there is only one big figure and children quickly learn what it is. Yet we are not measuring short time memory but visual acuity.

3 There is no way of calculating the exact size of these symbols for a given visual acuity, nor what exactly is the feature in each symbol that is makes the difference. When these symbols get blurred they all quickly become circles. Their form should be such that they get blurred equally when there is a refractive error, i.e., no one of the symbols should be easier to quess than the other three. This is an ideal which cannot be materialized. Or it is true in Landolt's ring test but that test does not function in every day use, for reasons that we do not understand fully.

4 The size of symbols in the prototype test can be approximately the same as that of Lighthouse test and we would use rows 20/100 to 20/10 and have two rows of Lighthouse 20/20 size, as there also is in the Lighthouse test. This, because this size - or 20/40 at 3 meters - is the size of symbols used in screening preschool children. In the Lighthouse test there is no size between 20/20 and 20/10; in our test there should be, as Lighthouse 20/20 is our 20/40 and there should be 20/30 row as well. The size of 20/30-row is one and half time that of 20/20.

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September 30, 1977

Mrs. Polly K. Edman

5 The forms of symbols I have drawn on an other paper.
Again, call, please, if there are any problems!
Good luck, dear friend. Hope to hear from you soon.

Love

Lea Hyvärinen, M.D.