

**ABSTRACT**

**COMPARISON OF NATURAL VISUAL ACUITY RESULT USING  
*ETDRS NEAR CHART AND ETDRS CHART* IN ADULT PATIENT  
(Comparison study in outclinic patient Dr. Soetomo Hospital Surabaya)**

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**Purpose:** to compare natural visual acuity test results using the ETDRS near chart and ETDRS chart.

**Method:** Uncorrected visual acuity measurement using ETDRS near chart and ETDRS chart was performed on patient between 21-39 years old. Visual acuity data from both charts were statistical analyzed with paired T-test. Pinhole test data from both charts were inserted to table 2x2 and then statistical analyzed with McNemar test.

**Result:** A total 109 patient (218 eyes) were examined, 18 eyes were excluded. Patients age 21 to 39 years old, with mean 25,250 years old. Mean of natural visual acuity difference between ETDRS chart and ETDRS near chart is 0.165 logMAR with T-test result  $p=0.000$ . Mean of pinhole visual acuity difference between ETDRS chart and ETDRS near chart is 0.056 logMAR with T-test  $p=0.000$ . Pinhole test in ETDRS chart compared to the ETDRS chart have McNemar result  $p=0.000$ . Sensitivity and specificity of pinhole tests on the ETDRS near chart are 64.3% and 93.2%. Especially in emmetropia group have natural visual acuity difference T-test result  $p=0,181$  and McNemar result  $p=0,727$  in pinhole test comparison.

**Conclusion:** There is significant difference in visual acuity result between ETDRS near chart and ETDRS chart. This means that ETDRS near chart cannot be used as a substitute ETDRS chart. Pinhole test ETDRS near chart have a low sensitivity value. Emmetropia group have no significant different between ETDRS near chart and ETDRS chart in visual acuity or pinhole test comparison.

**Key words:** natural visual acuity, pinhole test, ETDRS near chart.