



**Abstract**

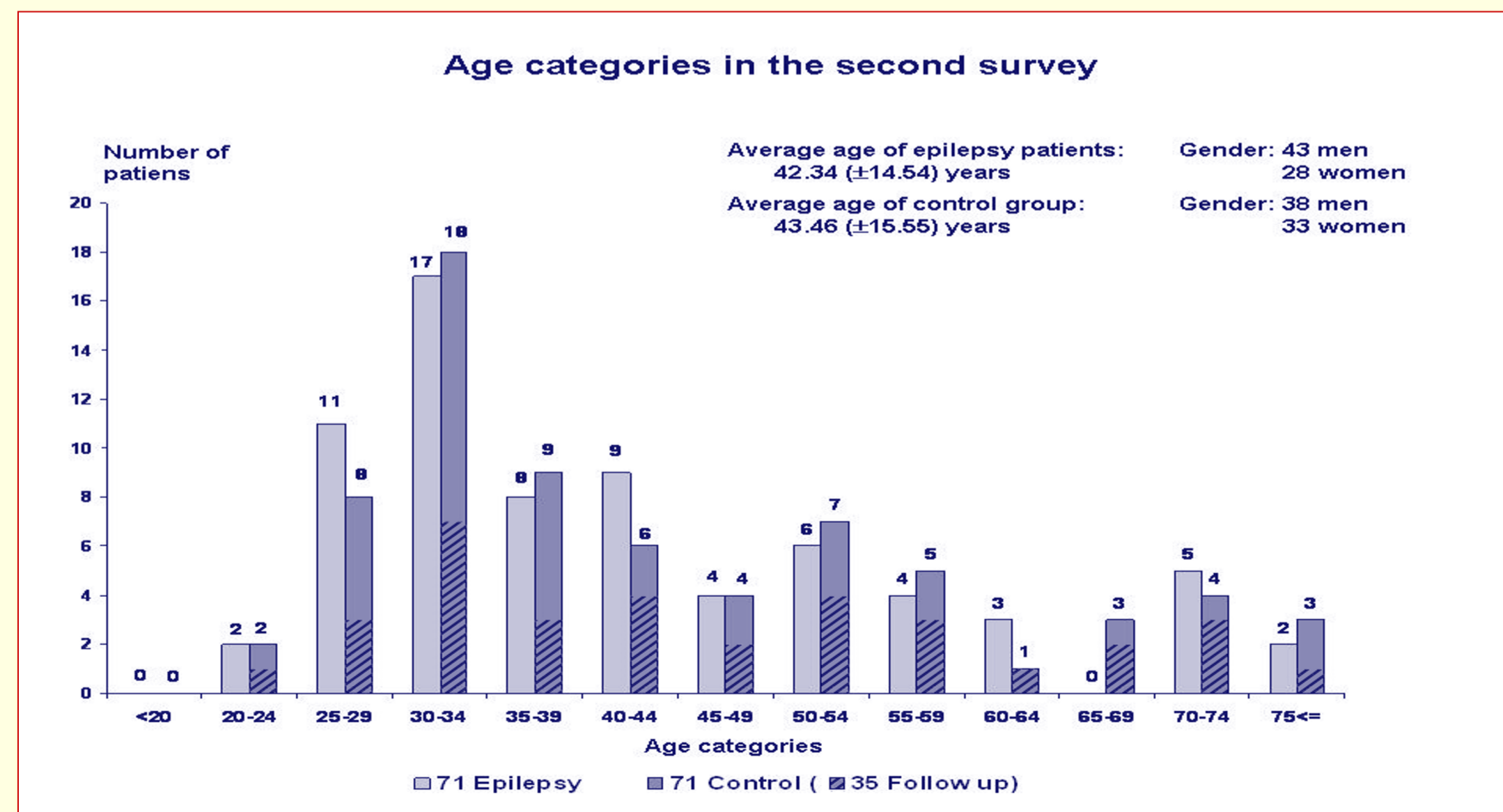
**Introduction**  
Objectives of this study was to test statistically, the changes in neurological and dental condition of epilepsy patients after 5 years, as compared with the age and sex matched control group of general population. (fig. 1).

**Materials and methods**  
Since epilepsy is a heterogenous group of patients, we have set up a new classification system with four subgroups taking into account the type of seizures, frequency and mental state, with special emphasis on the involvement of the masticatory apparatus (table 1). We compared the subgroups of epilepsy patients with each other and the control subjects. Present data were compared with the ones 5 years before. After general history, the Greene-Vermillion Oral Hygiene Index, the DMF-T score, and the periodontal status (CPITN-index) were examined. Statistical analysis was performed by SAS 8.2 for windows software.

**Results**  
The results showed, that according to our classification system, epilepsy patients are getting better  $p=0,001$ . Oral Hygiene Index was increased ( $p<0,0001$ ) in patient group, it was worse in group III. (4,5± 1,03) (fig. 2 and 3). Plaque Index (PI) get worse in patient group ( $p=0,0005$ ), and get better in control group ( $p=0,0004$ ). The DMF-T Index was higher in patient group at the first ( $p=0,03$ ) and at the second ( $p=0,009$ ) screening. It was increased in epilepsy and in patient group ( $p<0,0001$ ) as well. Increasing of CPITN Index was more pronounced ( $p=0,004$ ) in epilepsy group.

**Conclusion**  
In spite of the improved neurological condition of epilepsy patients due to more modern antiepileptic drugs, the oral hygiene, dental and periodontal status are worse as a consequence of bad socio-economical background. Consciousness of illness, feeling of dependence of relatives can depress epilepsy patient and reducing activity. Regular dental examination of epilepsy patients would be advisable.

Fig. 1. Age diagram



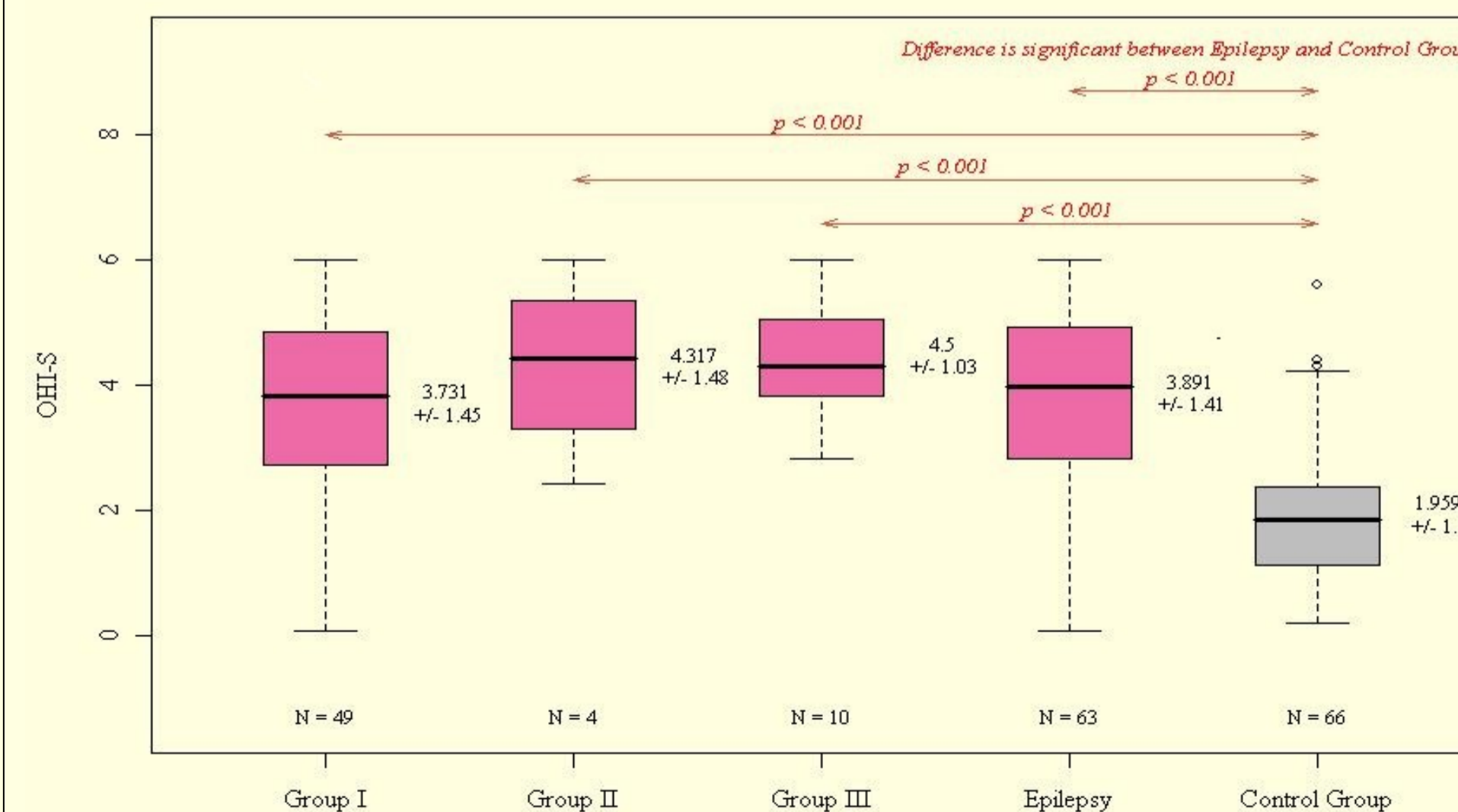
The average age of the patient and control group did not differ significantly ( $p=0.8$ )

Table 1. Classification system of epilepsy patients

Criteria of entrance	
Group I	Patients who have been seizure free for years, either with or without medication Patients with rare seizures (less often than once a year) Patients exclusively with seizures that do not involve the masticatory apparatus (absence, myoclonus and certain partial seizures)
Group II	Patients with frequent partial seizures involving the masticatory apparatus, such that are accompanied by clonisation of facial and masticatory muscles or oral automatisms (e.g. grinding of teeth). Generalised tonic-clonic seizures, if present, appear less often than once a year
Group III	Patients with frequent generalised tonic-clonic seizures (more often than once a year)
Group IV	Patients with mental disability, excluding compliance during dental treatment

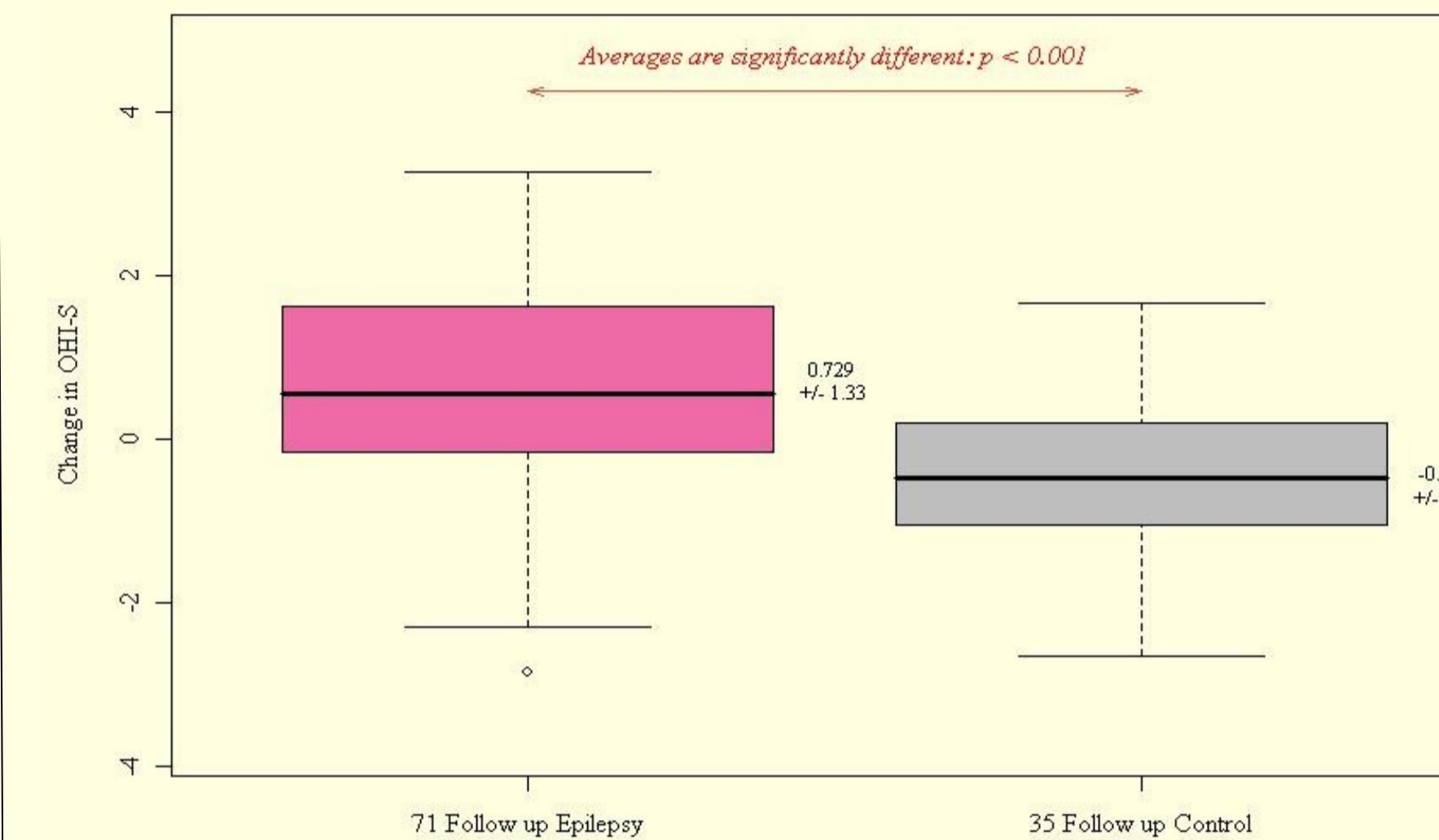
Results showed, that according to our classification system above, the neurological condition of epilepsy patients were getting better:  $p=0,001$ , after 5 years.

Fig.2. The OHI-S Index in the second survey in Epilepsy Group (3 subgroups) and in Control Group



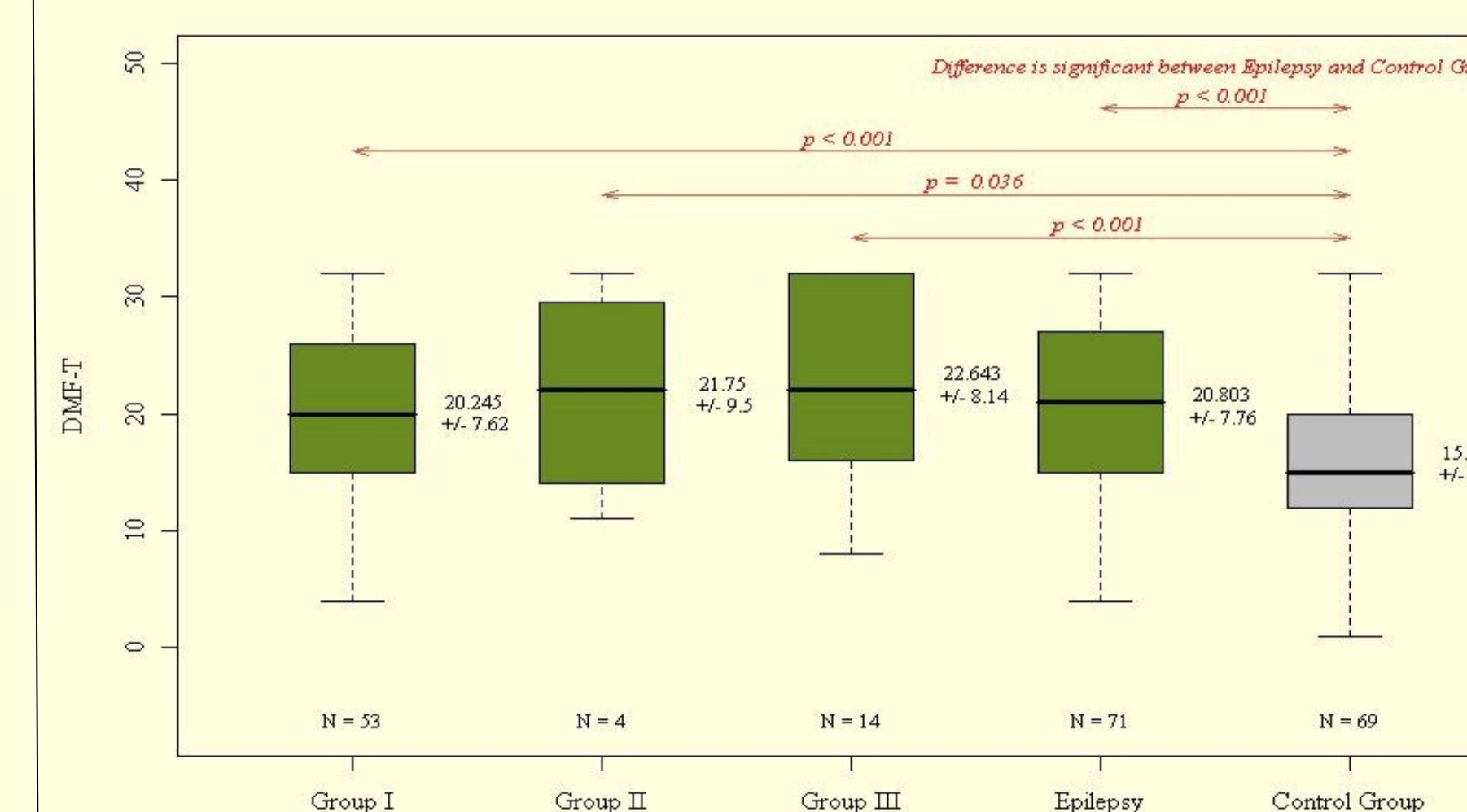
The OHI-S Index was significantly higher ( $p<0,0001$ ) in the second survey in the epilepsy group as compared to the control group.

Fig.3. Change in OHI-S Index between the first and second survey in 71 Follow up Epilepsy and 35 Follow up Control subjects



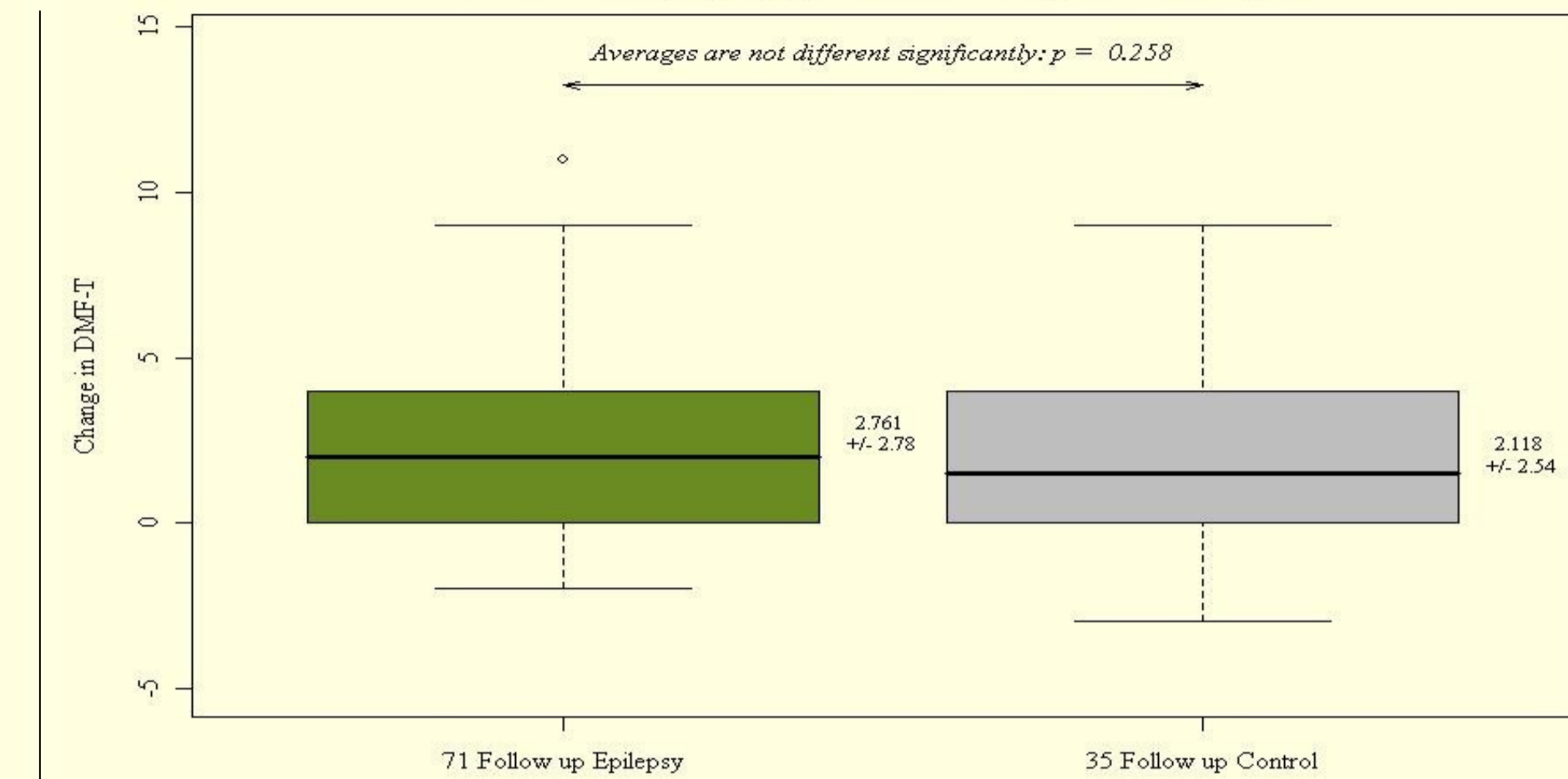
The degree of changing in OHI-S was significantly different ( $p=0,0001$ ) between epilepsy and control group. It was increasing in epilepsy, and decreasing in control group.

Fig.4. The DMF-T Index in the second survey in Epilepsy Group (3 subgroups) and in Control Group



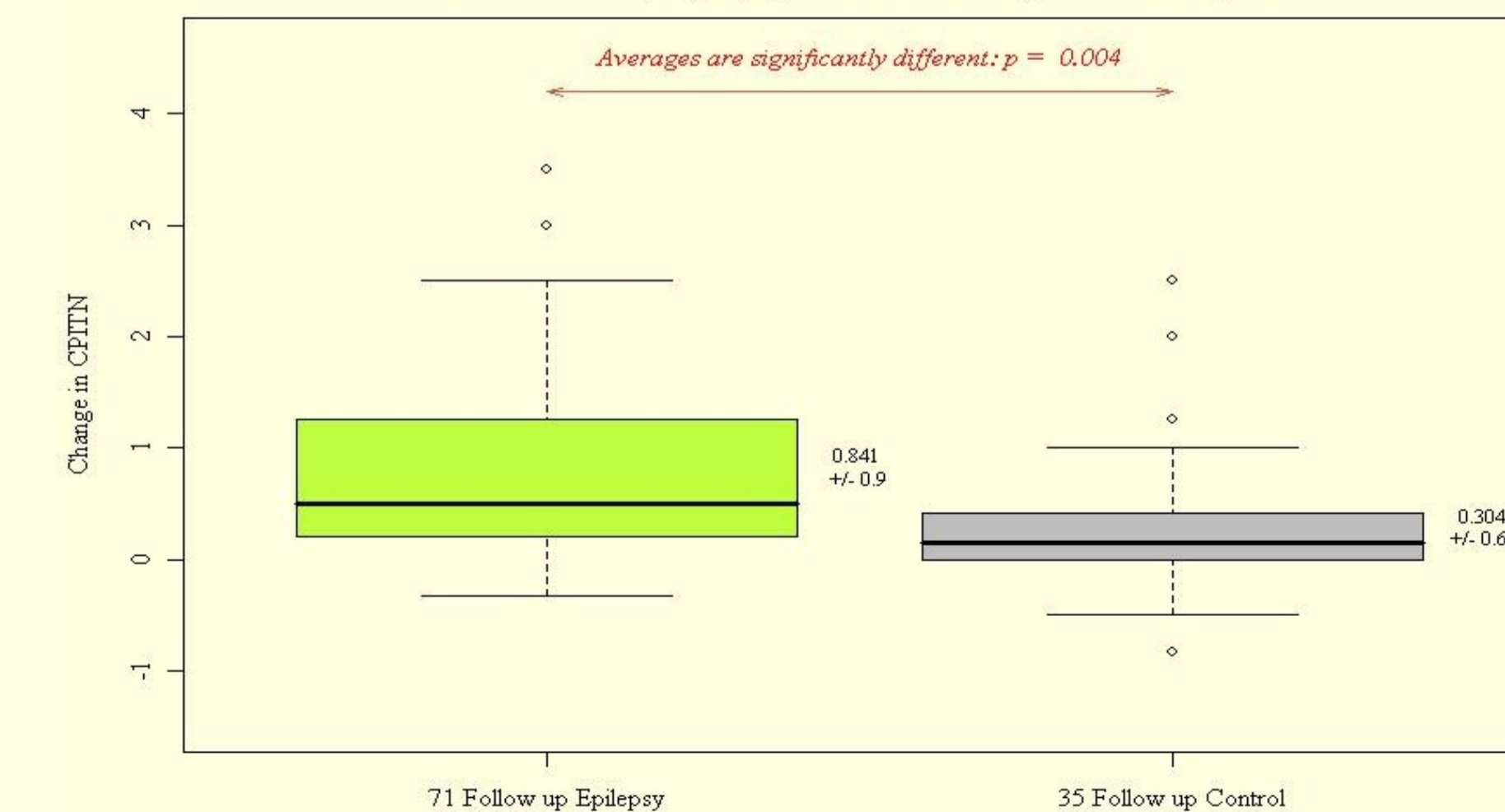
The DMF-T Index was higher in epilepsy group in the first ( $p=0,001$ ), and in the second ( $p=0,0002$ ) survey as well.

Fig.5. Change in DMF-T Index between the first and second survey in 71 Follow up Epilepsy and 35 Follow up Control subjects



The DMF-T Index was significantly higher ( $p<0,001$ ) both in epilepsy and control group as well, but the change didn't differ significantly ( $p=0,258$ ).

Fig.6. Change in CPITN Index between the first and second survey in 71 Follow up Epilepsy and 35 Follow up Control subjects



The increase of CPITN Index was more pronounced ( $p=0,004$ ) in epilepsy patients.