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## The evaluation of Nyvad’s caries diagnostic criteria in a group of Turkish pre-school children

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**Aim:** The aims of this research were to determine the epidemiological profile of dental caries in 4 to 6-year-old preschool children with two different caries indices-the standard df-t and Nyvad’s caries diagnostic criteria.

**Materials & Methods:** A total of 58 pre-school children with 1100 teeth in the age group of four to six years were selected for the study from among who applied to Marmara University, Dental School and Pediatric Dentistry clinic. Children teeth were cleaned and dried with cotton rolls and chip blower. The dental caries examinations were conducted under standardized conditions using plane mouth mirrors and explorers with the help of artificial illumination. The diagnostic criteria used were df-t and Nyvads's caries diagnostic criteria. Each tooth of all deciduous teeth was classified according to one of the following criteria: 0=sound; 1=active, surface intact; 2=active, surface discontinuity; 3=active, cavity; 4=inactive, surface intact; 5=inactive, surface discontinuity; 6=inactive, cavity; 7=filled; 8=filled with inactive lesion; 9=filled with active lesion; X=extracted.

**Results:** The mean df-t was 10.8 (±4.69). Most of the teeth that caries experience consisted of tooth with active lesions (80.7%), of which 9.6% were non-cavitated. The mean number of teeth with non-cavitated inactive lesions was 4.27%. The mean df-t constituted 10.8; the majority of all second molars were affected (86.22%), followed by the first molars (83.11%).

**Conclusions:** Prevalence of caries was high indicating that the population studied had a high disease rate. The results obtained with the more detailed Nyvad’s caries diagnostic criteria were higher than the ones obtained with the standard df-t index for teeth.

Table

	Number of Teeth Examined	Sound Teeth	Code 0	Code 1	Code 2	Code 3	Code 4	Code 5	Code 6
101	11	0	1.0	0	1	0	0	0	0
102	10	1	1.0	1	0	0	0	0	0
103	12	1	0.8	0	1	0	0	0	0
104	10	0	0.0	0	1	0	0	0	0
105	11	0	1.0	0	0	0	0	0	0
106	10	0	1.0	0	0	0	0	0	0
107	11	0	1.0	0	0	0	0	0	0
108	10	0	0.0	0	1	0	0	0	0
109	10	0	0.0	0	1	0	0	0	0
110	10	0	0.0	0	1	0	0	0	0
111	10	0	0.0	0	1	0	0	0	0
112	10	0	0.0	0	1	0	0	0	0
113	10	0	1.0	0	0	0	0	0	0
114	10	0	0.0	0	1	0	0	0	0
115	10	0	0.0	0	1	0	0	0	0
116	10	0	0.0	0	1	0	0	0	0
117	10	0	0.0	0	1	0	0	0	0
118	10	0	0.0	0	1	0	0	0	0
119	10	0	0.0	0	1	0	0	0	0
120	10	0	0.0	0	1	0	0	0	0
121	10	0	0.0	0	1	0	0	0	0
122	10	0	0.0	0	1	0	0	0	0
123	10	0	0.0	0	1	0	0	0	0
124	10	0	0.0	0	1	0	0	0	0
125	10	0	0.0	0	1	0	0	0	0
126	10	0	0.0	0	1	0	0	0	0
127	10	0	0.0	0	1	0	0	0	0
128	10	0	0.0	0	1	0	0	0	0
129	10	0	0.0	0	1	0	0	0	0
130	10	0	0.0	0	1	0	0	0	0
131	10	0	0.0	0	1	0	0	0	0
132	10	0	0.0	0	1	0	0	0	0
133	10	0	0.0	0	1	0	0	0	0
134	10	0	0.0	0	1	0	0	0	0
135	10	0	0.0	0	1	0	0	0	0
136	10	0	0.0	0	1	0	0	0	0
137	10	0	0.0	0	1	0	0	0	0
138	10	0	0.0	0	1	0	0	0	0
139	10	0	0.0	0	1	0	0	0	0
140	10	0	0.0	0	1	0	0	0	0
141	10	0	0.0	0	1	0	0	0	0
142	10	0	0.0	0	1	0	0	0	0
143	10	0	0.0	0	1	0	0	0	0
144	10	0	0.0	0	1	0	0	0	0
145	10	0	0.0	0	1	0	0	0	0
146	10	0	0.0	0	1	0	0	0	0
147	10	0	0.0	0	1	0	0	0	0
148	10	0	0.0	0	1	0	0	0	0
149	10	0	0.0	0	1	0	0	0	0
150	10	0	0.0	0	1	0	0	0	0
151	10	0	0.0	0	1	0	0	0	0
152	10	0	0.0	0	1	0	0	0	0
153	10	0	0.0	0	1	0	0	0	0
154	10	0	0.0	0	1	0	0	0	0
155	10	0	0.0	0	1	0	0	0	0
156	10	0	0.0	0	1	0	0	0	0
157	10	0	0.0	0	1	0	0	0	0
158	10	0	0.0	0	1	0	0	0	0
159	10	0	0.0	0	1	0	0	0	0
160	10	0	0.0	0	1	0	0	0	0
161	10	0	0.0	0	1	0	0	0	0
162	10	0	0.0	0	1	0	0	0	0
163	10	0	0.0	0	1	0	0	0	0
164	10	0	0.0	0	1	0	0	0	0
165	10	0	0.0	0	1	0	0	0	0
166	10	0	0.0	0	1	0	0	0	0
167	10	0	0.0	0	1	0	0	0	0
168	10	0	0.0	0	1	0	0	0	0
169	10	0	0.0	0	1	0	0	0	0
170	10	0	0.0	0	1	0	0	0	0
171	10	0	0.0	0	1	0	0	0	0
172	10	0	0.0	0	1	0	0	0	0
173	10	0	0.0	0	1	0	0	0	0
174	10	0	0.0	0	1	0	0	0	0
175	10	0	0.0	0	1	0	0	0	0
176	10	0	0.0	0	1	0	0	0	0
177	10	0	0.0	0	1	0	0	0	0
178	10	0	0.0	0	1	0	0	0	0
179	10	0	0.0	0	1	0	0	0	0
180	10	0	0.0	0	1	0	0	0	0
181	10	0	0.0	0	1	0	0	0	0
182	10	0	0.0	0	1	0	0	0	0
183	10	0	0.0	0	1	0	0	0	0
184	10	0	0.0	0	1	0	0	0	0
185	10	0	0.0	0	1	0	0	0	0
186	10	0	0.0	0	1	0	0	0	0
187	10	0	0.0	0	1	0	0	0	0
188	10	0	0.0	0	1	0	0	0	0
189	10	0	0.0	0	1	0	0	0	0
190	10	0	0.0	0	1	0	0	0	0
191	10	0	0.0	0	1	0	0	0	0
192	10	0	0.0	0	1	0	0	0	0
193	10	0	0.0	0	1	0	0	0	0
194	10	0	0.0	0	1	0	0	0	0
195	10	0	0.0	0	1	0	0	0	0
196	10	0	0.0	0	1	0	0	0	0
197	10	0	0.0	0	1	0	0	0	0
198	10	0	0.0	0	1	0	0	0	0
199	10	0	0.0	0	1	0	0	0	0
200	10	0	0.0	0	1	0	0	0	0
201	10	0	0.0	0	1	0	0	0	0
202	10	0	0.0	0	1	0	0	0	0
203	10	0	0.0	0	1	0	0	0	0
204	10	0	0.0	0	1	0	0	0	0
205	10	0	0.0	0	1	0	0	0	0
206	10	0	0.0	0	1	0	0	0	0
207	10	0	0.0	0	1	0	0	0	0
208	10	0	0.0	0	1	0	0	0	0
209	10	0	0.0	0	1	0	0	0	0
210	10	0	0.0	0	1	0	0	0	0
211	10	0	0.0	0	1	0	0	0	0
212	10	0	0.0	0	1	0	0	0	0
213	10	0	0.0	0	1	0	0	0	0
214	10	0	0.0	0	1	0	0	0	0
215	10	0	0.0	0	1	0	0	0	0
216	10	0	0.0	0	1	0	0	0	0
217	10	0	0.0	0	1	0	0	0	0
218	10	0	0.0	0	1	0	0	0	0
219	10	0	0.0	0	1	0	0	0	0
220	10	0	0.0	0	1	0	0	0	0
221	10	0	0.0	0	1	0	0	0	0
222	10	0	0.0	0	1	0	0	0	0
223	10	0	0.0	0	1	0	0	0	0
224	10	0	0.0	0	1	0	0	0	0
225	10	0	0.0	0	1	0	0	0	0
226	10	0	0.0	0	1	0	0	0	0
227	10	0	0.0	0	1	0	0	0	0
228	10	0	0.0	0	1	0	0	0	0
229	10	0	0.0	0	1	0	0	0	0
230	10	0	0.0	0	1	0	0	0	0
231	10	0	0.0	0	1	0	0	0	0
232	10	0	0.0	0	1	0	0	0	0
233	10	0	0.0	0	1	0	0	0	0
234	10	0	0.0	0	1	0	0	0	0
235	10	0	0.0	0	1	0	0	0	0
236	10	0	0.0	0	1	0	0	0	0
237	10	0	0.0	0	1	0	0	0	0
238	10	0	0.0	0	1	0	0	0	0
239	10	0	0.0	0	1	0	0	0	0
240	10	0	0.0	0	1	0	0	0	0
241	10	0	0.0	0	1	0	0	0	0
242	10	0	0.0	0	1	0	0	0	0
243	10	0	0.0	0	1	0	0	0	0
244	10	0	0.0	0	1	0	0	0	0
245	10	0	0.0	0	1	0	0	0	0
246	10	0	0.0	0	1	0	0	0	0
247	10	0	0.0	0	1	0	0	0	0
248	10	0	0.0	0	1	0	0	0	0
249	10	0	0.0	0	1	0	0	0	0
250	10	0	0.0	0	1	0	0	0	0
251	10	0	0.0	0	1	0	0	0	0
252	10	0	0.0	0	1	0	0	0	0
253	10	0	0.0	0	1	0	0	0	0
254	10	0	0.0	0	1	0	0	0	0
255	10	0	0.0	0	1	0	0	0	0
256	10	0	0.0	0	1	0	0	0	0
257	10	0	0.0	0	1	0	0	0	0
258	10	0	0.0	0	1	0	0	0	0
259	10	0	0.0	0	1	0	0	0	0
260	10	0	0.0	0	1	0	0	0	0
261	10	0	0.0	0	1	0	0	0	0
262	10	0	0.0	0	1	0</			

3. Parviainen H, Vahanikkila H, Laitala M L, Tjaderhane L and Anttonen V (2013) Evaluating performance of dental caries detection methods among third-year dental students. *BMC Oral Health* 13:70.

### **Biography**

Betul Kargul has completed her Graduation at Marmara University, Faculty of Dentistry in 1986 and started to study as a PhD student in 1987. She has been lecturing and directing undergraduate and postgraduate programmes. Her research expertise is epidemiology, caries research in children, preventive dentistry and dental materials. She has published more than 90 referred papers and has more than 120 presentations in the international congresses. She was a Councilor in European Academy of Pediatric Dentistry from 2002-2012. Currently, she is working as a Full Professor in the Department of Pediatric Dentistry, Dental School at Marmara University, Istanbul, Turkey.

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